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**A Census of the Avifauna of the Fox River Crossings Project Area,
Kane and DuPage Counties, Illinois**

**Center for Biodiversity
Technical Report 1996 (4)**

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Introduction

The Illinois Department of Transportation (IDOT) has proposed five alternative corridors for the construction of three approaches and bridges across the Fox River in Kane County, Illinois (Figure 1). As requested by IDOT, we are conducting four-season censuses (fall, winter, spring and breeding seasons) of the birds along these proposed corridors. This report contains the results of a search of records for the occurrence of endangered and threatened avian species in Kane and DuPage counties, as well as an assessment of the potential habitat that exists in the corridors for these listed bird species. We also present the results of our censuses of birds in these areas conducted between 25 October 1994 and 28 June 1995.

Changes in the alignments of the Mooseheart Road and Red Gate Road corridors (Figure 1) were made after our surveys were underway. To accommodate these changes we have established additional census points and are in the process of completing surveys in these areas. Three censuses (winter, spring and breeding seasons), have yet to be completed at these new points. The results of these censuses will be submitted as an addendum to this report upon their completion in the summer of 1996.

Endangered and Threatened Birds of Kane and DuPage Counties

We consulted three sources, the Illinois Natural Heritage Database, the Illinois Fish and Wildlife Information Service, and the Illinois Breeding Bird Atlas, in order to establish which endangered and threatened bird species were likely to occur within the project area (Table 1).

Over the past 20 years 25 Illinois endangered bird species (two of which are also federally endangered) and five Illinois threatened bird species have been recorded in Kane County. Twenty three Illinois endangered bird species (two of which are also federally endangered) and seven Illinois threatened bird species have been recorded in DuPage County. Four of these species, all breeding season records, occurred within a mile of the proposed corridors (Table 1; Figure 2, record 17; Figure 3, records 41 and 46; Figure 4, record 59).

We identified potential breeding areas within the corridors for endangered and threatened species using aerial photographs and topographic maps. We then visited these areas and directly evaluated their potential as breeding habitat based on their physical and floral characteristics. Our

habitat assessments (Table 2) are based on published breeding requirements for these species (e.g. Ehrlich et al. 1988; Bohlen 1989; Herkert 1992).

We found no high-quality breeding habitat for any endangered or threatened species in any of the corridors. Marginal breeding habitat exists within the corridors for 13 endangered or threatened species (Table 2). These species were given special attention during our censuses.

Census Methods

We established census points in representative habitat types within each corridor (Figures 5-8, 10, 11, 13). Legal descriptions and a brief explanation of the habitat surrounding each of the census points are given in Tables 3-7. We divided the year into four census seasons corresponding to major periods of the avian life cycle in the Midwest (Table 8). Because of the migratory habits of birds, each season typically has a different and distinctive complement of resident species. Each census point was visited twice per season. During these visits we used modified point-counts (Blondel et al. 1981) to determine community composition. We recorded all individuals seen or heard within a range of 50 meters (including birds seen flying over) during the 10 minute count periods. These timed counts provide measures of the structure of bird communities (number of individuals and number of species) within the various habitat types. Because we are also interested in the presence and absence of bird species within the corridors, we also recorded all of our sightings of birds within the corridors outside of these 10 minute count periods. These sightings are included in our species lists for each census area (Table 9).

We also ranked the magnitude of concern ('C' in Tables 10-23) for each species in every season. For the breeding and winter seasons we used indices developed by *Partners in Flight*, a working group of North American avian ecologists (Thompson et al. 1992). Birds are scored on a scale from 1 (low concern) to 5 (extremely high concern). In constructing these indices the following factors were considered: abundance, distribution, threats (e.g. habitat loss, demographic vulnerability, etc.) and population trend (Hunter et al. 1992).

Partners in Flight has yet to develop a similar index for birds during migration, therefore, we developed our own with the help of Dr. J. Herkert of the Illinois Endangered Species Protection Board and Dr. S. K. Robinson of the Center for Wildlife Ecology, Illinois Natural History Survey. Both Drs. Herkert and Robinson participated in the original *Partners in Flight* work. We used three parameters in formulating our migratory concern index: 1. population size in the Midwest (using the *Partners in Flight* abundance ranking), 2. population trend over the past ten

years (using the *Partners in Flight* population trend estimates), and 3. the degree of migratory habitat specificity (i.e., how restrictive the habitat requirements of each species is during migration) as ranked by S. K. Robinson and D. A. Enstrom.

We provide these concern indices as a tool to help assess the relative importance of the various habitat types within the corridor to the avian community. Typically, endangered and threatened species have concern scores of 3 or above. Clearly, species formally classified as endangered or threatened are not the only ones that are subject to significant threats or which should be considered when assessing the value of a particular parcel of land. Areas which support many species of moderate concern may be very important to the local avifauna. We define a *species of concern* as one that has a concern index value ≥ 3 (Thompson et al. 1992; Robinson and Enstrom, unpublished data). The threats to a given species may change with the season. This change is reflected in changes in the magnitude 'C' among seasons.

The number of *species of concern* present in a habitat provides a measure of the relative importance of that habitat to the avian community. We feel this measure is better than traditional measures of habitat quality such as 'diversity' or 'richness' (the total number of species) because it more accurately reflects the potential impact that the disturbance of a given parcel might have on those populations most at risk.

To date, *Partners in Flight* has focused its efforts on long distance migratory species (e.g., song birds). Concern scores are not available for non-migrants (e.g., tits and some woodpeckers) or for migrant species that do not leave the United States during migration (e.g., sparrows and ducks).

We also noted the occurrence of Illinois Watch List species. This list is compiled by the Endangered Species Protection Board of Illinois and consists of three categories:

- 1) *Unknown status*. Species that are suspected to be declining but for which data are insufficient.
- 2) *Special concern*. Species that are known to be declining significantly in numbers but still have relatively large populations in Illinois.
- 3) *Extirpated*. Species that were once listed as Illinois endangered or threatened but have been extirpated from the state.

Census Results

Bolz Road Corridor

Nine census points were established in the Bolz Road corridor (Table 3; Figures 5-7). We recorded a total of 573 individuals of 52 species representing 21 families during our four season censuses (Table 9). We found one Illinois endangered species (Sharp-shinned Hawk) and two Illinois threatened species (Great Egret and Brown Creeper) during our Bolz Road surveys. Eight species of concern (Table 9) were also recorded in the Bolz Road corridor during the our censuses.

A. Winter Census

We recorded 146 individuals of 20 species of 14 families during the Bolz Road winter census conducted from 29 December 1994 through 24 February 1995 (Table 10). The highest number of species (14) was recorded at census point B3 (Figure 6). A number of habitat types (i. e., river edge, bottomland and upland forest, urban development and agricultural areas) surround this point. Habitat heterogeneity is often correlated with relatively high numbers of species in a community.

No endangered species, Illinois Watch List species, or *species of concern* were detected in the Bolz Road area during the winter. A single Brown Creeper (Illinois threatened) was observed foraging on two occasions at census points B1 and B9 (Figures 5 and 7). This species utilizes a broad range of habitat types during the winter and likely over-winters in the area (Bohlen 1989; Herkert 1992).

B. Spring Census

We recorded 201 individuals representing 32 species of 15 families during the spring census conducted from 14 March to 3 May 1995 (Table 11). The highest number of species was again recorded at point B3 (17) which is characterized by a diversity of habitat types.

One Sharp-shinned Hawk (Illinois endangered) and one Brown Creeper (Illinois threatened) were observed in the Bolz Road corridor during the spring census. The Sharp-shinned Hawk was observed flying over census point B5 (Figure 6). This species migrates at this time of year and was likely a transient. The woods around census point B5 may provide foraging and roosting habitat for this species during migration. Sharp-shinned Hawks are not known to breed in the area (Herkert 1992; Table 1). The Brown Creeper was observed foraging at census point B8. This species utilizes a broad range of habitat types during the spring migration season and is a common migrant throughout the state. No *species of concern* were observed during this period.

C. Breeding Census

We recorded 178 individuals representing 36 species of 20 families during the breeding season censuses conducted between 7 June and 28 June 1995 (Table 12). Again we recorded the highest number of species (24) at census point B3.

We found no endangered species during our breeding census. One Illinois threatened species, a single Great Egret, was observed foraging along the Fox River approximately 250 m downstream from census point B3 (Figure 6) outside of the timed census periods. This species utilizes a wide range of aquatic habitats for foraging. However, there are no records of egret colonies within one mile of the project corridor (Table 1; Figure 2) and we found no evidence of egret breeding within the corridor during our surveys. There are Great Egret breeding records from nearby Kane and DuPage counties and we suspect that this individual nested within 25 km (the maximum distance an Egret will range from its nest to forage) of the corridor. There is also a 1994 record of adult Yellow-headed Blackbirds (Illinois endangered) during the breeding season at a site one half mile south of the western end of the corridor (Figure 2, record 17). However, we found no suitable breeding habitat for this species within the corridor. Eight *species of concern* were observed during the breeding season censuses (Table 12). All of these species are neotropical migrant songbirds (winter in the neotropics and breed in North America). This group of birds has suffered drastic declines in recent years due to habitat fragmentation both on the breeding grounds in North America and on the wintering grounds in the tropics (Robinson et al. 1995).

D. Fall Census

We recorded 46 individuals of 11 species representing eight families during our fall survey conducted between 25 October and 16 November 1994 (Table 13). No endangered species, Illinois Watch List species or *species of concern* were observed during the fall census. The number of species and number of *species of concern* were low at all census points during the fall.

Two Brown Creepers (Illinois threatened) were observed foraging at census point B5 (Figure 6) during the fall census. This species is a common transient throughout Illinois at this time of year.

Stearns Road Corridor

Ten census points were established in the Stearns Road corridor (Figure 8; See Table 4). Two designated Illinois Natural Areas lie adjacent to the Stearns Road corridor (Figure 9). We recorded 831 individuals of 59 species of 23 families during our Stearns Road corridor surveys

(Table 9). We also found two Illinois endangered, two Illinois threatened and one Illinois watch list species in the area (Table 9).

A. Winter Census

We recorded 270 individuals of 21 species representing 14 families during the winter season survey conducted between 29 December 1994 and 24 February 1995 (Table 14). Point S3-A (Figure 8) had the highest number of species (15). A number of different habitat types (i.e., open water swamp, a pond with tall emergent vegetation along its edge, and an extensive grassland) surround this census point.

A Northern Harrier (Illinois endangered) was observed on 9 February 1995 foraging over the grasslands near census point S3-A (Figure 8). This species is a transient in Illinois during the winter, often observed over pasture, grasslands and fallow fields. One *species of concern*, the Eastern Meadowlark, was recorded during the winter census at census point S3-A (Table 14). This species occasionally over-winters as far north as Chicago in open fields and grassland habitat associated with good cover (e. g., woodlots and well developed hedge rows). The area around S3-A provides adequate winter habitat for this species.

B. Spring Census

We recorded 267 individuals of 35 species representing 19 families during the spring censuses conducted between 14 March and 3 May 1995 (Table 15). Census point S10 (Figure 8) had the highest number of species (17) followed by S7 (16) and S8 (16). Three to four habitat types are found near each of these census points.

A single Pied-billed Grebe (Illinois threatened) was observed on a small the pond near census point S3-A (Figure 8). Grebes are found in waterways, lakes and ponds throughout the state during the spring and fall migrations. There is no suitable breeding habitat in the corridor for this species (Table 2). One Illinois Watch List species, the Sora ('unknown' status) was recorded at census point S4. Soras are found throughout the state in marshes, wet grassy fields and at the edges of rivers, ponds and prairie sloughs during the spring. A number of sites (points S2, S3, S3-A, S4, S7, S8, S9, S10; Figure 8) along the Stearns Road corridor satisfy the migratory habitat requirements for this species. One *species of concern*, a single Blue-winged Warbler, was recorded at point S6 (Table 15). There are no records of this species breeding in the area (Graber et al. 1983). This species nests in early successional habitat but utilizes a wide range of habitat types during migration (Graber et al. 1983). Point S6 is in bottomland forest habitat.

C. Breeding Census

We recorded 222 individuals representing 39 species of 20 families during the breeding season survey conducted from 7 June through 28 July 1995 (Table 16). The highest numbers of species (16) were recorded at census points S3-A, S8 and S11.

No endangered or threatened bird species were observed in this corridor during the breeding season. One Illinois Watch List species, the Sora ('unknown' status), was recorded at point S4. The Sora nests in dense cattail and reed marshes, on the edges of rivers, ponds and prairie sloughs and in wet grassy fields (Ehrlich et al. 1988). A number of sites (census points S2, S3, S3-A, S4, S7, S8, S9, S10; Figure 8) along the Stearns Road corridor satisfy the nesting habitat requirements of this species. There are breeding season records for four Illinois endangered or threatened bird species from within one mile of the Stearns Road corridor (Figure 3, record 41). At the western edge of Pratt-Wayne Woods Forest Preserve young-of-the-year and adult Pied-billed Grebes (Illinois threatened) were observed in 1990. Adult Black Terns (Illinois endangered) were seen at a nest in 1987, and were again observed in the area in 1990. An adult male Yellow-headed Blackbird (Illinois endangered) was recorded in the summer of 1990.

Eight *species of concern* were recorded during the breeding season (Table 16). Two of these species, the Marsh Wren (recorded at S3-A) and the Wood Thrush (recorded at S11), have very high concern scores (4). Site S3-A has the tall emergent vegetation characteristic of Marsh Wren nesting habitat (Herkert 1992). A number of other marshes within the Stearns Road study area may provide suitable Marsh Wren breeding habitat (census points S2, S3, S10, S7, S8). Wood Thrushes breed in moist deciduous forests, often near water (James et al. 1984). The area around point S11 is suitable Wood Thrush breeding habitat (Table 4).

D. Fall Census

We recorded 57 individuals of 16 species representing eight families in the Stearns Road corridor during the fall census conducted from 25 October through 16 November 1994 (Table 17). Census point S5 had the highest number of species (7).

No endangered bird species were observed during the fall. One Brown Creeper (Illinois threatened) was seen foraging near census point S11. This species utilizes a broad range of habitat types during migration and was not found in the area during the winter (see above). No Illinois Watch List species or *species of concern* were found.

Dean Street Corridor

Very little natural habitat exists along the Dean Street corridor (Figure 10). The majority of the corridor consists of urban and industrial properties with little or no vegetation. Because of this general lack of habitat, only one census point was established in the Dean Street corridor. Even the habitat around this point is of marginal quality (Figure 10; Table 5).

We recorded 120 individuals of 25 species in 13 families during our Dean Street corridor survey (Table 18). One federally and Illinois endangered species was recorded within the corridor. No threatened species were observed. Three *species of concern*, all neotropical migrant songbirds seen during the breeding season, were recorded.

A. Winter Census

The winter census was conducted from 29 December 1994 through 24 February 1995. We observed 44 individuals of 14 species representing 11 families in the Dean Street corridor during the winter census. No endangered or threatened bird species, Illinois Watch List species, or *species of concern* were observed in this corridor during the winter survey (Table 18).

B. Spring Census

The spring census was conducted from 14 March through 3 May 1995. Thirty six individuals of 17 species representing 12 families were recorded during the spring census. No endangered or threatened avian species, Illinois Watch List species, or *species of concern* were recorded (Table 18).

C. Breeding Census

The breeding season census was conducted from 7 June through 28 June 1995. A total of 26 individuals representing 16 species of 10 families were observed in the Dean Street corridor during the breeding season census (Table 18). No endangered or threatened bird species or Illinois Watch List species were observed within the corridor. Three *species of concern* were recorded (Table 18), all neotropical migrant songbirds in woodland edge or scrub habitats.

D. Fall Census

The fall census was conducted from 25 October through 16 November 1994. Fifteen individuals of six species representing five families were recorded (Table 18). One Bald Eagle (Federally endangered; Illinois endangered) was observed flying high over census point D1 in November 1994. This species, is a transient during the fall in Illinois and over-winters in large numbers along both the Illinois and Mississippi rivers. No winter or breeding habitat exists in the

Dean Street corridor for this species. No Illinois threatened species, Illinois Watch List species, or *species of concern* were recorded during the fall census (Table 18).

Mooseheart Road Corridor

Four-season censuses have been completed for two census points in the Mooseheart Road corridor (points M1 and M2, Figure 11). We established four additional census points after the breeding season census to accommodate alignment changes. The fall census for these points has been completed. The censuses of these additional points will be completed by June 1996. Legal descriptions and brief summaries of the habitat type around each census point are given in Table 6. One designated Illinois Natural Area, Mooseheart Ravine, lies adjacent to the Mooseheart Road corridor (Figure 12).

We recorded 237 individuals of 33 species and 16 families during our Mooseheart Road corridor surveys. No endangered species were found during our survey. We recorded one Illinois threatened species and four *species of concern* in the corridor.

The Red Oak Nature Center, part of the Fox Valley Park District, Batavia, Illinois, is bisected by the Mooseheart alignment (Figure 12). The staff at Red Oak has compiled a list of birds observed during the spring from 1979 through 1994 (Table 9). A total of 90 species of 34 families have been recorded at the center. This list includes four Illinois threatened species, one Illinois endangered species and 33 *species of concern*. No endangered or threatened bird species are known to breed on the grounds of the center. Approximately 17 *species of concern* breed on the property. This is a relatively high number. However, this type of cumulative species list is not a reliable assay of avian community composition.

A. Winter Census

Thirty five individuals of nine species representing six families were recorded during the winter census conducted from 29 December 1994 through 24 February 1995 (Table 19). The number of species recorded at both census points was relatively low. Census point M2 had the highest number of recorded species (8). No endangered species were observed. One Brown Creeper (Illinois threatened) was seen foraging at census point M2. This species utilizes a broad range of habitat types during the winter season. We found no Illinois Watch List species, or *species of concern*.

B. Spring Census

Fifty individuals of 16 species representing nine families were recorded in the Mooseheart Road corridor during the spring census conducted from 14 March through 3 May 1995 (Table 20). Species numbers were relatively low for both census points (Table 20). No endangered or threatened species, Illinois Watch List species, or *species of concern* were recorded during the spring censuses.

C. Breeding Census

Forty six individuals of 18 species representing 13 families were recorded in the Mooseheart corridor during the breeding season census conducted from 7 June through 28 June 1995 (Table 21). Sixteen and 13 species were observed at census points M2 and M1, respectively.

Two adult Double-crested Cormorants (Illinois threatened) were observed on 1 May 1995 within the Mooseheart Road corridor roosting on a Fox River island between census points M3 and M4 (Figure 11). Two adult and one immature Double-crested Cormorants were observed roosting in the same tree on 6 June 1995. This species occurs in lakes, rivers and swamps with open water. Cormorants nest in trees and occasionally on artificial structures in mixed or single species colonies. The wooded islands along this stretch of the Fox River may provide adequate nesting sites. Two recent breeding records (Aurora, 1989; Elgin, 1993) are known from the Fox valley in Kane County, but no nests were found in the area. Cormorants may forage up to 30 km from their breeding colonies. Adult Brown Creepers (Illinois threatened) were also observed at a nest in the southwestern part of Fermilab in 1989 (Figure 4, record 59). Two *species of concern*, Gray Catbird and Song Sparrow, were also recorded during the breeding season censuses and probably bred in the scrubland surrounding point M1 (Table 21).

D. Fall Census

The fall census was conducted at all points in the Mooseheart corridor between 25 October and 16 November 1995 (Table 22). One hundred and six individuals representing 18 families of 27 species were recorded. We recorded high species counts of 14 at census points M3 and M5. These numbers are relatively low for breeding season point counts.

One Illinois Brown Creeper (Illinois threatened) was observed foraging at census point M5. This species utilizes a broad range of habitat types during the fall migration.

Red Gate Road Corridor

Alignment changes necessitated the establishment of a new set of census points in the Red Gate Road corridor in the fall of 1995 (Figure 13). Legal descriptions and a brief summary of the habitat type for each of these census points are given in Table 7. A complete list of species observed to date is given in Table 9. A fall census has been completed. The other censuses will be completed in June 1996.

A. Fall Census

We recorded 53 individuals of 19 species representing 12 families during the fall census conducted from 25 October through 16 November 1995 (Table 23). Census point R12 had the highest number of species (12). We found no endangered species during our Red Gate census. One Brown Creeper (Illinois threatened), was observed foraging at census point R11. This species is a common fall migrant throughout Illinois. No Illinois Watch List species or *species of concern* were found during the fall census.

Summary

Endangered and Threatened Species

Seven Illinois endangered or threatened bird species were observed within the proposed Fox River bridge corridors during our four-season censuses:

1) Pied-billed Grebe, Illinois Threatened (Stearns Road)

One Pied-billed Grebe was observed in the Stearns Road corridor in the spring of 1995. This bird was probably using this site as a migration stop-over area. Grebes may be found in many waterways, lakes and ponds throughout the state during the spring and fall migrations.

Although Grebes have bred at a site within one mile of the corridor in recent history (see page 7), we found no evidence of breeding or adequate breeding habitat for this species in any of the corridors (Table 2).

2) Double-crested Cormorants, Illinois Threatened (Mooseheart Road)

Cormorants were observed along the Fox River within the Mooseheart corridor on 1 May and 6 June 1995. The wooded islands along this stretch of the river could provide nesting sites for this species; however, we found no nests in the area. Two recent Cormorant breeding records are

known from the Fox valley in Kane County (Aurora, 1989; Elgin, 1993). Cormorants have also recently bred in nearby Cook County (Figure 2, record 24).

3) Great Egret, Illinois Threatened (Bolz Road)

We observed a single Great Egret foraging along the Fox River during the breeding season in the Bolz Road corridor. We found no evidence that this species breeds in the area. There are no records of Egret colonies within one mile of the project corridor (Table 1). Great Egrets have been recorded in the vicinity of the corridors several times in recent history (Figure 2, records 1, 5, 15, 24), and there are two recent breeding records from southwestern DuPage county (Figure 4, record 65). Egrets range up to 25 km during their daily foraging and we suspect that this individual was from one of these areas.

4) Bald Eagle, Federally Endangered, Illinois Endangered (Dean Street)

A single Bald Eagle was observed flying high over the Dean Street corridor during the fall census period. This species over-winters in large numbers along the Illinois and Mississippi rivers in Illinois. It also occasionally breeds along these rivers. There is no Eagle breeding or winter roosting habitat within any of the corridors. It is probable that this individual was a transient.

5) Northern Harrier, Illinois Endangered (Stearns Road)

A single Northern Harrier was seen during the winter census in the Stearns Road corridor. This species is transient in Illinois during the winter season when it may be observed foraging over pastures, grasslands and fallow fields. The Northern Harrier is a very rare breeder in Illinois (Herkert 1992) and is unlikely to breed in the fragmented grassland and marsh habitat available in the corridors.

6) Sharp-shinned Hawk, Illinois Endangered (Bolz Road)

A single Sharp-shinned Hawk was observed in the Bolz Road corridor during the spring migration season. This hawk is an uncommon transient during both the fall and spring migration seasons in Illinois. There are no breeding records in the Fox Valley for this species (Bohlen 1989; Herkert 1992) and we found no suitable breeding habitat for this species in any of the corridor areas.

7) Brown Creeper, Illinois Threatened (Bolz Road, Stearns Road, Red Gate Road)

During the spring and fall censuses we observed Brown Creepers in the Bolz Road, Stearns Road and Red Gate Road corridors. This species is transient during these periods when it uses a wide range of habitat types for roosting and foraging. Brown Creepers were also observed

at points B1, B8 and B9 (Figures 5 and 7) during our winter censuses, suggesting that they may be winter residents.

Marginal breeding habitat for Brown Creepers exists in the bottomland forests along the Fox River. There is one breeding season record for this species within one mile of the Mooseheart Road corridor (Figure 2, record 59). However, we found no Brown Creepers in any of the census areas during the breeding season.

Illinois Watch List Species

Sora (Stearns Road)

One Illinois Watch List species, the Sora ('unknown' status), was recorded at point S4 (Figure 9) in the Stearns Road corridor during the spring census. Soras nests in dense cattail and reed marshes on the edges of rivers, ponds and prairie sloughs, and in wet grassy fields. A number of areas in this corridor (S2, S3, S3-A, S4, S7, S8, S9, S10; Figure 9) may provide nesting habitat for this species. We did not, however, find evidence of Sora breeding during our censuses.

Species of Concern

Most of the *species of concern* recorded during our censuses were neotropical migrant songbirds. Several bred in the area, but most were migratory transients. Two *species of concern* that probably bred in the area, the Marsh Wren (recorded at S3-A; Figure 9), and the Wood Thrush (recorded at S11), have very high concern indices ($C = 4$; Table 16). Site S3-A, as well as a number of other marshes within the Stearns Road study area (S2, S3, S10, S7, S8; Figure 8), has the tall emergent vegetation structure required by nesting Marsh Wrens (Herkert 1992). Wood Thrushes breed in moist deciduous forests, conditions that exist near census point S11. However, the forest at this point is relatively small and is probably not high-quality breeding habitat (i.e. the reproductive success of these birds in fragmented habitats is likely very poor, Robinson et al. 1995). The other seven *species of concern* we recorded during the breeding season nest in second growth and scrub habitat. None of the areas in the proposed corridors could be classified as high-quality nesting habitat for any of these species.

Most of the *species of concern* recorded were migrants that do not breed in Kane and DuPage counties. However, the loss of migratory habitat also has been implicated in the continuing decline of many of these species (Thompson et al. 1992).

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Table 1. Endangered and threatened birds of Kane and DuPage counties. 1975 to 1994.

Species	Status	Kane County			DuPage County		
		Recorded in county	Bred in county	Recorded within one mile of the corridors	Recorded in county	Bred in county	Recorded within one mile of the corridors
Pied-billed Grebe	IL-T	Yes	Yes	No	Yes	Yes	Yes
Double-crested Cormorant	IL-T	No	unknown	No	Yes	No	No
American Bittern	IL-E	Yes	unknown	No	Yes	unknown	No
Least Bittern	IL-E	Yes	unknown	No	Yes	Yes	No
Snowy Egret	IL-E	Yes	No	No	Yes	unknown	No
Little Blue Heron	IL-E	Yes	No	No	Yes	unknown	No
Great Egret	IL-T	Yes	Yes	No	Yes	unknown	No
Black-crowned Night Heron	IL-E	Yes	Yes	No	Yes	unknown	No
Yellow-crowned Night Heron	IL-T	No	No	No	Yes	No	No
Osprey	IL-E	Yes	No	No	Yes	No	No
Bald Eagle	IL-E US-E	Yes	No	No	Yes	No	No
Northern Harrier	IL-E	Yes	unknown	No	Yes	Yes	No
Sharp-shinned Hawk	IL-E	Yes	No	No	Yes	No	No
Cooper's Hawk *	IL-E	Yes	Yes	No	Yes	Yes	No
Red-shouldered Hawk	IL-E	Yes	No	No	Yes	Yes	No
Swainson's Hawk	IL-E	Yes	Yes	No	No	No	No
Peregrine Falcon	IL-E US-E	Yes	No	No	Yes	No	No
Common Moorhen	IL-T	Yes	Yes	No	Yes	Yes	Yes
Sandhill Crane	IL-E	Yes	Yes	No	Yes	No	No
Upland Sandpiper	IL-E	Yes	Yes	No	Yes	Yes	No
Wilson's Phalarope	IL-E	Yes	No	No	Yes	No	No
Common Tern	IL-E	Yes	No	No	No	No	No
Forester's Tern	IL-E	Yes	unknown	No	Yes	unknown	No
Black Tern	IL-E	Yes	Yes	No	Yes	Yes	Yes
Common Barn Owl	IL-E	Yes	No	No	No	No	No
Long-eared Owl	IL-E	Yes	No	No	Yes	No	No
Short-eared Owl	IL-E	Yes	No	No	Yes	unknown	No
Brown Creeper	IL-T	Yes	Yes	No	Yes	Yes	Yes
Bewick's Wren	IL-E	Yes	Yes	No	No	No	No
Veery	IL-T	Yes	unknown	No	Yes	Yes	No
Loggerhead Shrike	IL-T	Yes	Yes	No	Yes	Yes	No
Henslow's Sparrow	IL-E	No	No	No	Yes	Yes	No
Yellow-headed Blackbird	IL-E	Yes	Yes	No	Yes	Yes	Yes

IL-T = Illinois threatened, IL-E = Illinois endangered, US-T = Federal threatened, US-E = Federal endangered. * The Illinois Endangered Species Protection Board has recommended that this species be removed from the Illinois endangered and threatened species list.

Table 2. Endangered and threatened species breeding habitat.

Species	Required habitat	Corridor				
		Bolz	Stearns	Red Gate	Dean	Moose-heart
Pied-billed Grebe ††	hemi-marsh	A	A	A	A	A
Double-crested Cormorant ††	marsh	A	P	A	A	M
American Bittern †	marsh with upland margin	A	P	A	A	A
Least Bittern †	hemi-marsh	A	P	A	A	A
Snowy Egret †	wooded marsh	P	M	A	A	P
Great Egret ††	wooded marsh	P	P	A	A	P
Black-crowned Night Heron ††	wooded marsh	P	P	A	A	P
Osprey †	wooded lakes and rivers	A	A	A	A	A
Bald Eagle ‡; †	wooded lakes and rivers	A	A	A	A	A
Northern Harrier †	grasslands	A	M	A	A	A
Sharp-shinned Hawk †	mature forest and open woodland	M	P	P	P	P
Cooper's Hawk † *	mature forest and open woodland	M	P	M	M	M
Red-shouldered Hawk †	moist riparian forest	P	A	P	A	P
Swainson's Hawk †	open woodland	A	A	A	A	A
Peregrine Falcon	cliffs and man-made structures	A	A	A	A	A
Common Moorhen ††	hemi-marsh	A	A	A	A	A
Sandhill Crane †	wet grasslands and shallow marshes	A	A	A	A	A
Upland Sandpiper †	open pasture, upland grasslands	A	A	A	A	A
Forester's Tern †	hemi-marsh	A	P	A	A	A
Black Tern †	hemi-marsh	A	P	A	A	A
Common Barn Owl †	open pasture / abandoned structures	A	M	M	A	A
Long-eared Owl †	mature forest, pine stands	A	A	P	A	A
Short-eared Owl †	upland grasslands	A	M	P	A	A
Brown Creeper ††	wet forest	M	M	P	A	M
Bewick's Wren †	thickets, hedgerow	A	P	P	M	M
Veery ††	mature forest	A	A	A	A	P
Loggerhead Shrike †	open pasture, grasslands	P	P	P	A	A
Henslow's Sparrow †	pasture, grasslands	A	M	M	A	A
Yellow-headed Blackbird †	hemi-marsh	A	M	A	A	A

M = marginal breeding habitat present, P = poor or inadequate breeding habitat, A = breeding habitat absent.

‡ = Federal endangered; † = Illinois endangered; †† = Illinois threatened. * The Illinois Endangered Species Protection Board has recommended that this species be removed from the Illinois endangered and threatened species list.

Table 3. Legal locations and habitat types of the Bolz Road census points.

Point	Habitat type	Legal description
B1	Pine plantation	Kane Co., IL; T42N, R8E, Section 5, SW/4, SW/4, SW/4; Crystal Lake, IL 7.5' series USGS topographic quadrangle map.
B2	Upland woods	Kane Co., IL; T42N, R8E, Section 9, NW/4, NW/4, NE/4; Crystal Lake, IL 7.5' series USGS topographic quadrangle map.
B3	Floodplain forest	Kane Co., IL; T42N, R8E, Section 3, SW/4, SE/4, SE/4; Crystal Lake, IL 7.5' series USGS topographic quadrangle map.
B4	Shrubland	Kane Co., IL; T42N, R8E, Section 3, SE/4, SE/4, SE/4; Crystal Lake, IL 7.5' series USGS topographic quadrangle map.
B5	Upland woods/Mine soils	Kane Co., IL; T42N, R8E, Section 2, SE/4, SW/4, SW/4; Crystal Lake, IL 7.5' series USGS topographic quadrangle map.
B6	Shrubland	Kane Co., IL; T42N, R8E, Section 11, NW/4, NE/4, NW/4; Crystal Lake, IL 7.5' series USGS topographic quadrangle map.
B7	Upland woods	Kane Co., IL; T42N, R8E, Section 2, SE/4, SE/4, SE/4; Crystal Lake, IL 7.5' series USGS topographic quadrangle map.
B8	Mixed woods	Kane Co., IL; T42N, R8E, Section 1, SE/4, SE/4, SW/4; Barrington, IL 7.5' series USGS topographic quadrangle map.
B9	Grassland/Shrubland	Kane Co., IL; T42N, R8E, Section 12, NE/4, NE/4, NW/4; Barrington, IL 7.5' series USGS topographic quadrangle map.

Table 4. Legal locations and habitat types of the Stearns Road census points.

Point	Habitat type	Legal description
S2	Sedge / Cattail wetland	Kane Co., IL; T40N, R8E, Section 1, NW/4, NE/4, SE/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S3	Sedge / Cattail wetland	Kane Co., IL; T40N, R8E, Section 1, NW/4, NE/4, SE/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S3-A	Grassland / Marsh	DuPage Co., IL; T40N, R9E, Section 6, NE/4, NW/4, SW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S4	Predominantly cattail marsh	Kane Co., IL; T40N, R8E, Section 1, SE/4, SW/4, SE/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S6	Bottom land forest	Kane Co., IL; T40N, R8E, Section 1, SW/4, NE/4, SW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S7	Sedge / cattail marsh	Kane Co., IL; T40N, R8E, Section 1, SE/4, SW/4, SW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S8	Sedge / cattail marsh	Kane Co., IL; T40N, R8E, Section 12, NE/4, NE/4, NW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S9	Upland forest along railroad	Kane Co., IL; T40N, R8E, Section 1, NW/4, NW/4, SW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S10	Upland forest along railroad	Kane Co., IL; T40N, R8E, Section 2, NE/4, NW/4, SE/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
S11	Upland forest	Kane Co., IL; T40N, R8E, Section 2, NW/4, NE/4, SW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.

Table 5. Legal location and habitat type of the Dean Street census point.

Point	Habitat type	Legal description
D1	Shrubland	Kane Co., IL; T40N, R8E, Section 29, NE/4, NE/4, SW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.

Table 6. Legal locations and habitat types of the Mooseheart Road census points.

Point	Habitat type	Legal description
M1	Shrubland / Grassland	Kane Co., IL; T38N, R8E, Section 3, NW/4, NW/4, NW/4; Aurora North, IL 7.5' series USGS topographic quadrangle map.
M2	Shrubland	Kane Co., IL; T38N, R8E, Section 3, NW/4, NE/4, NW/4; Aurora North, IL 7.5' series USGS topographic quadrangle map.
M3	Floodplain forest	Kane Co., IL; T39N, R8E, Section 38, SE/4, SW/4, NE/4; Aurora North, IL 7.5' series USGS topographic quadrangle map. (Les Arends County Forest Preserve)
M4	Floodplain forest	Kane Co., IL; T39N, R8E, Section 38, NE/4, NE/4, SW/4; Aurora North, IL 7.5' series USGS topographic quadrangle map. (Red Oak Nature Preserve)
M5	Bottomland forest	Kane Co., IL; T39N, R8E, Section 34, SW/4, SW/4, NE/4; Aurora North, IL 7.5' series USGS topographic quadrangle map.
M6	Shrubland	Kane Co., IL; T39N, R8E, Section 36, SE/4, SE/4, SW/4; Aurora North, IL 7.5' series USGS topographic quadrangle map.

Table 7. Legal locations and habitat types of the Red Gate Road census points.

Point	Habitat type	Legal description
R11	Upland oak forest	Kane Co., IL; T40N, R8E, Section 4, NW/4, SW/4, NW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
R12	Upland forest	Kane Co., IL; T40N, R8E, Section 13, SW/4, SE/4, NW/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
R13	Bottomland forest (Kane County Forest Preserve)	Kane Co., IL; T40N, R8E, Section 15, NW/4, NW/4, NE/4; Geneva, IL 7.5' series USGS topographic quadrangle map.
R14	Grassland restoration (Kane County Forest Preserve)	Kane Co., IL; T40N, R8E, Section 29, NE/4, NE/4, SE/4; Geneva, IL 7.5' series USGS topographic quadrangle map.

Table 8. Duration of census seasons.

Season	Dates
Winter	1 December to 28 February
Spring	1 March to 30 April
Breeding	1 May to 31 August
Fall	1 September to 30 November

Table 9. Species lists for the five corridors and the Red Oak Nature Center. Lists for corridors are composite four-season lists. The list for the Red Oak Nature Center was generated by Nature Center staff and visitors between 1979 - 1994.

Family / Species	Boltz Rd	Stearns Rd	Dean St	Moose-heart Rd	Red Gate Rd (fall only)	Red Oak Nature Center
<u>Podicipedidae</u>						
Pied-billed Grebe ††		X				X
<u>Phalacrocoracidae</u>						
Double-crested Cormorant						
<u>Ardeidae</u>						
Great Blue Heron	X	X				X
Green-backed Heron		X				X
Great Egret ††	X					X
<u>Anatidae</u>						
Canada Goose	X	X		X		X
Wood Duck	X	X				X
Mallard	X	X				X
Blue-winged Teal						X
Green-winged Teal	X					
Common Merganser	X					
Hooded Merganser						X
<u>Cathartidae</u>						
Turkey Vulture						X
<u>Accipitridae</u>						
Osprey † ◊						X
Northern Harrier †		X				
Northern Goshawk						X
Sharp-shinned Hawk †	X	X				
Broad-winged Hawk						X
Red-tailed Hawk	X	X	X			X
Bald Eagle ‡, ††			X			
<u>Phasianidae</u>						
Ringed-necked Pheasant		X		X		X
<u>Rallidae</u>						
American Coot						X
Sora **		X				
<u>Laridae</u>						
Ring-billed Gull	X					
<u>Charadriidae</u>						
Killdeer		X				X
<u>Scolopacidae</u>						
Solitary Sandpiper						X
Least Sandpiper						X
<u>Columbidae</u>						
Rock Dove *		X				
Mourning Dove	X	X	X	X		

‡ = Federal endangered; † = Illinois endangered; †† = Illinois threatened; ** = Illinois Watch list; ◊ = *Species of concern*; * = non-native species.

Table 9. (continued).

Family / Species	Boltz Rd	Stearns Rd	Dean St	Moose-heart Rd	Red Gate Rd (fall only)	Red Oak Nature Center
Cuculidae						
Yellow-billed Cuckoo ◇						X
Black-billed Cuckoo ◇						X
Strigidae						
Great Horned Owl		X				X
Caprimulgidae						
Common Nighthawk						X
Whip-poor-will ◇						X
Apodidae						
Chimney Swift ◇						X
Trochilidae						
Ruby-throated Hummingbird ◇						X
Alcedinidae						
Belted Kingfisher	X	X		X		
Picidae						
Red-bellied Woodpecker	X	X		X	X	X
Red-headed Woodpecker	X					X
Yellow-bellied Sapsucker						X
Downy Woodpecker	X	X	X	X	X	X
Hairy Woodpecker	X	X				X
Northern Flicker	X	X	X	X	X	
Tyrannidae						
Eastern Wood-Pewee ◇	X	X				X
Eastern Phoebe ◇		X				X
Great Crested Flycatcher ◇	X	X				X
Eastern Kingbird ◇						X
Hirundinidae						
Tree Swallow ◇						X
Purple Martin ◇						X
N. Rough-winged Swallow						X
Cliff Swallow						X
Barn Swallow ◇						X
Corvidae						
Blue Jay	X	X	X	X	X	X
American Crow	X	X	X	X	X	X
Paridae						
Black-capped Chickadee	X	X	X	X	X	
Sittidae						
White-breasted Nuthatch	X			X	X	
Red-breasted Nuthatch						X
Certhiidae						
Brown Creeper †† ◇	X	X		X		X
Troglodytidae						
House Wren	X	X	X			X
Marsh Wren ◇		X				

‡ = Federal endangered; † = Illinois endangered; †† = Illinois threatened; ** Illinois Watch list; ◇ = Species of concern; * = non-native species.

Table 9. (continued).

Family / Species	Boltz Rd	Stearns Rd	Dean St	Moose-heart Rd	Red Gate Rd (fall only)	Red Oak Nature Center
<u>Mucicapidae (Sylviinae)</u>						
Golden-crowned Kinglet ◊	X	X	X	X		X
Ruby-crowned Kinglet	X	X		X	X	X
Blue-gray Gnatcatcher ◊	X	X				X
<u>Mucicapidae (Turdinae)</u>						
Wood Thrush ◊	X	X				X
Veery ††						X
Hermit Thrush				X	X	X
American Robin	X	X	X	X	X	X
<u>Mimidae</u>						
Gray Catbird ◊	X	X	X	X		X
Brown Thrasher	X	X	X			X
<u>Bombycillidae</u>						
Cedar Waxwing ◊	X	X	X	X	X	X
<u>Sturnidae</u>						
European Starling *	X	X	X	X	X	X
<u>Vireonidae</u>						
Yellow-throated Vireo ◊	X					
Red-eyed Vireo	X					
Warbling Vireo ◊		X				X
<u>Emberizidae (Parulinae)</u>						
Black-and-white Warbler ◊						X
Blue-winged Warbler ◊		X				
Tennessee Warbler ◊						X
Yellow Warbler ◊		X				
Cape May Warbler						X
Yellow-rumped Warbler		X		X	X	X
Black-throated Green Warbler						X
Black-throated Blue Warbler ◊						X
Blackburnian Warbler						X
Bay-breasted Warbler ◊						X
Blackpoll Warbler						X
Palm Warbler						X
Ovenbird ◊						X
Mourning Warbler ◊						X
Common Yellowthroat ◊		X				X
American Redstart ◊				X		X
<u>Emberizidae (Thraupinae)</u>						
Scarlet Tanager ◊						X
Summer Tanager ◊						X
<u>Emberizidae (Cardinalinae)</u>						
Northern Cardinal	X	X	X	X	X	X
Rose-breasted Grosbeak ◊						X
Indigo Bunting	X	X		X		X

‡ = Federal endangered; † = Illinois endangered; †† = Illinois threatened; ** Illinois Watch list; ◊ = *Species of concern*; * = non-native species.

Table 9. (concluded).

Family / Species	Boltz Rd	Stearns Rd	Dean St	Moose-heart Rd	Red Gate Rd (fall only)	Red Oak Nature Center
Emberizidae (Emberizinae)						
Eastern Towhee ◊	X	X				X
American Tree Sparrow		X		X		
Chipping Sparrow	X	X	X		X	
Field Sparrow	X					
Song Sparrow ◊	X	X	X	X		X
Swamp Sparrow		X				
Fox Sparrow	X					X
White-throated Sparrow	X	X	X	X	X	X
White-crowned Sparrow						X
Dark-eyed Junco	X	X	X	X		X
Emberizidae (Icterinae)						
Eastern Meadowlark ◊	X	X				
Red-winged Blackbird	X	X	X	X		X
Common Grackle	X			X		X
Brown-headed Cowbird	X	X	X	X		X
Baltimore Oriole ◊	X	X	X			X
Fringillidae						
House Finch*	X	X	X	X	X	
Purple Finch						X
American Goldfinch	X	X	X	X	X	X
Passeridae						
House Sparrow *	X	X	X	X		X
Total number of families	22	28	13	16	0	34
Total number of species	52	59	25	33	0	90
Total number of individuals	573	831	120	237	0	-
Federal endangered species	0	0	0	0	0	0
Illinois endangered species	1	2	0	0	0	1
Illinois threatened species	2	2	0	1	0	4
Species of concern	1	8	3	4	1	33
Illinois watch list	0	1	0	0	0	0

‡ = Federal endangered; † = Illinois endangered; †† = Illinois threatened; ** Illinois Watch list; ◊ = *Species of concern*; * = non-native species.

Table 10. Bolz Road winter census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Species	Census Point									Total	C
	B1	B2	B3	B4	B5	B6	B7	B8	B9		
Canada Goose	0	0	2	16	3	0	0	0	0	21	-
Mallard	0	0	7	1	0	0	0	0	0	8	-
Common Merganser	0	0	2	0	0	0	0	0	0	2	-
Red-tailed Hawk	1	0	1	1	0	0	0	0	0	3	1
Ring-billed Gull	0	0	1	0	0	0	0	0	0	1	-
Belted Kingfisher	0	0	0	1	0	0	0	0	0	1	1.7
Red-bellied Woodpecker	0	0	1	1	0	0	1	1	0	4	-
Downy Woodpecker	2	0	1	0	1	1	1	2	1	9	-
Blue Jay	1	0	1	1	0	0	0	3	0	6	-
American Crow	1	2	4	2	1	2	3	9	1	25	-
Black-capped Chickadee	5	4	2	3	2	2	2	4	1	25	-
White-breasted Nuthatch	0	1	0	1	0	0	1	2	0	5	-
Brown Creeper ††	1	0	0	0	0	0	0	2	1	4	-
European Starling *	0	0	2	1	0	0	0	0	0	3	-
Northern Cardinal	0	0	0	1	0	0	2	2	0	5	-
Dark-eyed Junco	0	1	0	0	0	4	1	4	2	12	-
House Finch *	0	0	0	0	1	1	0	0	0	2	-
American Goldfinch	1	1	1	1	0	0	0	1	0	5	2
House Sparrow *	0	1	1	3	0	0	0	0	0	5	-
Total number of individuals	12	10	26	33	8	10	11	30	6	146	
Total number of species	7	6	14	13	5	5	7	10	5	20	
Federal endangered species	0	0	0	0	0	0	0	0	0	0	
Illinois endangered species	0	0	0	0	0	0	0	0	0	0	
Illinois threatened species	1	0	0	0	0	0	0	0	0	1	
Species of concern	0	0	0	0	0	0	0	0	0	0	

†† = Illinois threatened, * = Non-native.

Table 11. Bolz Road spring census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Census Point											
Species	B1	B2	B3	B4	B5	B6	B7	B8	B9	Total	C
Canada Goose	0	0	14	0	0	0	0	0	0	14	-
Wood Duck	0	0	5	0	0	0	0	0	0	5	-
Mallard	0	0	1	0	0	0	0	0	0	1	-
Green-winged Teal	0	0	4	0	0	0	0	0	0	4	-
Sharp-shinned Hawk †	0	0	0	0	1	0	0	0	0	1	-
Red-bellied Woodpecker	0	0	2	0	0	0	1	1	1	5	-
Northern Flicker	0	0	0	0	1	0	0	0	0	1	2.3
Downy Woodpecker	1	3	1	1	0	1	1	1	0	9	-
Blue Jay	1	2	2	1	2	0	0	0	1	9	-
American Crow	0	5	1	0	1	2	0	1	6	16	-
Black-capped Chickadee	4	4	2	0	0	4	2	3	2	21	-
White-breasted Nuthatch	0	0	2	0	0	0	0	1	1	4	-
Brown Creeper ††	0	0	0	0	0	0	0	1	0	1	-
House Wren	0	0	1	0	0	0	0	0	0	1	1.3
Golden-crowned Kinglet	0	0	0	0	0	0	0	0	2	2	2.3
Ruby-crowned Kinglet	0	0	0	1	0	1	1	1	3	7	-
American Robin	2	2	3	2	3	1	2	0	0	15	1
Brown Thrasher	0	1	0	0	0	0	0	1	0	2	-
European Starling *	0	1	1	3	1	1	2	1	1	11	-
Northern Cardinal	2	1	2	1	2	2	3	1	2	16	-
Eastern Towhee	0	0	0	0	1	0	0	0	0	1	1.7
Song Sparrow	1	3	3	3	1	1	0	0	0	12	1
Field Sparrow	0	0	0	0	0	0	0	2	1	3	-
Chipping Sparrow	1	0	0	1	0	0	0	0	1	3	1
Dark-eyed Junco	2	1	0	0	0	0	2	1	2	8	-
White-throated Sparrow	0	0	4	1	0	0	0	0	0	5	-
Fox Sparrow	0	0	0	0	0	1	0	0	0	1	-
Red-winged Blackbird	0	0	0	1	0	0	0	0	0	1	2.3
Common Grackle	0	0	0	4	0	0	0	1	0	5	-
Brown-headed Cowbird	0	0	0	1	0	0	1	0	0	2	1
House Finch *	0	0	0	1	0	0	1	0	0	2	-
American Goldfinch	0	0	1	1	0	0	0	0	0	2	2
House Sparrow *	0	1	0	2	4	2	2	1	0	12	-
Total number of individuals	14	24	49	24	17	16	18	17	23	202	
Total number of species	8	11	17	15	9	10	11	14	12	33	
Federal endangered species	0	0	0	0	0	0	0	0	0	0	
Illinois endangered species	0	0	0	0	1	0	0	0	0	1	
Illinois threatened species	0	0	0	0	0	0	0	1	0	1	
Species of concern	0	0	0	0	0	0	0	0	0	0	

† = Illinois endangered, †† = Illinois threatened, * = Non-native.

Table 12. Bolz Road breeding census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Species	Census Point									Total	C
	B1	B2	B3	B4	B5	B6	B7	B8	B9		
Great Blue Heron	0	0	1	0	0	0	0	0	0	1	-
Wood Duck	0	0	2	0	0	0	0	0	0	2	-
Red-tailed Hawk	0	0	1	0	0	0	0	0	0	1	1
Mourning Dove	0	0	0	2	0	0	0	0	0	2	1
Red-bellied Woodpecker	0	0	2	0	0	0	0	0	0	2	-
Red-headed Woodpecker	0	0	1	0	0	1	0	0	0	2	-
Downy Woodpecker	0	1	1	1	0	0	2	0	1	6	-
Hairy Woodpecker	0	0	1	0	0	0	0	0	0	1	-
Eastern Wood-pewee	0	0	1	0	0	1	1	0	0	3	2
Great-crested Flycatcher ◇	0	1	2	1	1	0	1	1	0	7	3
Blue Jay	0	1	6	1	4	1	0	2	0	15	-
American Crow	0	3	2	0	0	0	2	1	1	9	-
Black-capped Chickadee	3	4	0	2	0	1	0	0	0	10	-
White-breasted Nuthatch	0	0	1	0	0	1	0	0	0	2	-
House Wren	1	1	1	1	3	1	0	1	1	10	1
Blue-gray Gnatcatcher ◇	0	0	0	0	0	1	0	0	0	1	3
American Robin	3	0	1	3	0	3	1	1	0	12	1
Gray Catbird ◇	0	1	0	0	1	1	0	2	3	8	3
Brown Thrasher	0	0	1	0	0	0	0	0	0	1	-
Cedar Wax wing	0	0	1	0	0	0	0	3	0	4	2
European Starling *	0	1	0	1	0	0	4	0	2	8	-
Yellow-throated Vireo ◇	0	0	1	0	0	0	0	0	0	1	3
Red-eyed Vireo	0	0	0	0	0	0	1	0	0	1	2
Northern Cardinal	2	2	0	1	1	1	2	2	1	12	-
Rose-breasted Grosbeak ◇	0	0	0	1	0	0	0	0	0	1	3
Indigo Bunting	1	2	1	1	1	1	1	1	0	9	2
Eastern Towhee ◇	0	0	0	0	0	0	0	1	2	3	3
Song Sparrow ◇	1	1	1	0	0	1	1	1	1	7	3
Field Sparrow	0	0	0	0	0	0	0	1	1	2	-
Chipping Sparrow	0	0	1	2	0	0	1	1	0	5	2
Common Grackle	1	0	3	0	0	0	1	1	0	6	-
Brown-headed Cowbird	0	1	2	0	0	1	1	0	0	5	1
Baltimore Oriole ◇	0	0	1	0	0	0	0	0	0	1	3
House Finch	0	0	0	0	0	1	0	0	0	1	-
American Goldfinch	0	1	0	2	1	1	2	1	0	8	2
House Sparrow *	0	0	4	3	0	0	2	0	0	9	-
Total number of individuals	12	20	39	22	12	17	23	20	13	178	
Total number of species	7	13	24	14	7	15	15	14	9	36	
Federal endangered species	0	0	0	0	0	0	0	0	0	0	
Illinois endangered species	0	0	0	0	0	0	0	0	0	0	
Illinois threatened species	0	0	0	0	0	0	0	0	0	0	
Species of concern	1	3	4	2	2	3	2	4	3	8	

◇ = Species of concern; * = Non-native.

Table 13. Bolz Road fall census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Census Point											
Species	B1	B2	B3	B4	B5	B6	B7	B8	B9	Total	C
Downy Woodpecker	1	1	0	1	1	0	1	1	1	7	-
Blue Jay	1	1	0	0	0	0	0	0	0	2	-
American Crow	0	0	1	1	1	0	0	0	2	5	-
Black-capped Chickadee	1	6	0	1	1	1	2	1	1	14	-
Brown Creeper ††	0	0	0	0	2	0	0	0	0	2	-
European Starling *	0	0	0	0	0	0	2	0	0	2	-
Northern Cardinal	0	2	0	0	0	0	0	1	0	3	-
Dark-eyed Junco	0	4	0	1	0	0	1	0	0	6	-
Common Grackle	0	0	0	0	0	0	0	0	1	1	-
American Goldfinch	0	0	0	1	0	0	0	0	0	1	2
House Sparrow *	1	0	0	1	0	0	1	0	0	3	-
Total number of individuals	4	14	1	6	5	1	7	3	5	46	
Total number of species	4	5	1	6	4	1	5	3	4	11	
Endangered species	0	0	0	0	0	0	0	0	0	0	
Threatened species	0	0	0	0	0	0	0	0	0	0	
Watch List species	0	0	0	0	0	0	0	0	0	0	
Species of concern	0	0	0	0	0	0	0	0	0	0	

†† = Illinois threatened, * = Non-native.

Table 14. Stearns Road winter census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Species	Census Point											C
	S 2	S 3	S 3-A	S 4	S 6	S 7	S 8	S 9	S 10	S 11	Total	
Mallard	0	0	16	0	0	0	0	0	0	2	18	-
Northern Harrier †	0	0	1	0	0	0	0	0	0	0	1	-
Red-tailed Hawk	1	0	1	0	1	0	1	0	1	0	5	1
Mourning Dove	7	0	0	0	0	0	3	0	0	2	12	1
Owl Species	0	0	1	0	0	0	0	0	0	0	1	-
Belted Kingfisher	0	0	0	0	0	0	0	0	0	1	1	2
Downy Woodpecker	2	0	1	1	1	4	3	0	0	1	13	-
Blue Jay	0	1	1	0	0	1	2	0	0	0	5	-
American Crow	1	5	4	3	1	5	13	7	47	7	93	-
Black-capped Chickadee	3	2	1	0	4	6	6	2	0	2	26	-
White-breasted Nuthatch	0	0	0	0	0	1	1	1	0	1	4	-
European Starling *	7	0	1	1	1	0	3	2	0	2	17	-
Northern Cardinal	2	0	2	0	4	3	3	2	2	2	20	-
Song Sparrow	0	0	1	0	1	1	0	0	0	0	3	1
American Tree Sparrow	0	0	10	0	0	0	0	0	0	0	12	-
Dark-eyed Junco	0	0	0	0	2	5	3	0	1	0	12	-
Eastern Meadowlark ◇	0	0	1	0	0	0	0	0	0	0	1	3
Red-winged Blackbird	0	0	3	1	0	2	0	0	0	0	6	1
House Finch *	0	0	0	0	0	0	0	0	0	2	2	-
American Goldfinch	0	0	0	0	0	2	0	1	0	0	3	-
House Sparrow *	0	0	6	1	1	1	4	0	0	2	15	-
Total number of individuals	23	8	50	7	16	31	42	15	51	24	270	
Total number of species	7	3	15	5	9	11	11	6	4	11	21	
Endangered species	0	0	1	0	0	0	0	0	0	0	1	
Threatened species	0	0	0	0	0	0	0	0	0	0	0	
Watch List species	0	0	0	0	0	0	0	0	0	0	0	
Species of concern	0	0	1	0	0	0	0	0	0	0	1	

† = Illinois endangered; ◇ = *Species of concern*; * = Non-native.

Table 15. Stearns Road spring census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Census Point												
Species	S 2	S 3	S3-A	S 4	S 6	S 7	S 8	S 9	S10	S11	Total	C
Pied-billed Grebe ††	0	0	1	0	0	0	0	0	0	0	1	-
Great-blue Heron	0	0	1	0	0	0	0	0	0	0	1	-
Canada Goose	0	0	1	4	0	0	3	0	0	0	8	-
Wood Duck	0	0	0	0	0	2	0	0	0	0	2	-
Mallard	0	0	12	5	0	0	0	0	0	0	17	-
Sora **	0	0	0	1	0	0	0	0	0	0	1	-
Killdeer	0	0	3	1	0	0	0	0	0	0	4	1
Rock Dove *	0	0	0	0	0	0	0	0	1	0	1	-
Mourning Dove	1	0	0	0	0	0	0	0	1	0	2	1
Northern Flicker	1	0	0	0	0	1	1	0	1	0	4	2.3
Downy Woodpecker	0	1	0	2	1	2	1	1	1	2	11	-
Hairy Woodpecker	0	0	0	0	0	2	1	0	0	0	3	-
Blue Jay	0	1	0	0	0	2	2	0	1	2	8	-
American Crow	0	0	0	0	0	0	1	1	1	2	5	-
Black-capped Chickadee	1	1	0	0	1	2	0	1	0	1	7	-
House Wren	0	0	0	0	1	1	0	1	0	0	3	1.3
Ruby-crowned Kinglet	0	0	0	0	0	0	0	1	0	1	2	-
Blue-gray Gnatcatcher	0	0	0	0	1	0	0	0	0	0	1	1.7
American Robin	2	2	2	1	1	2	0	2	1	2	15	1
Brown Thrasher	1	0	0	0	0	0	1	0	0	1	3	-
European Starling *	2	0	0	0	0	1	5	1	2	1	12	-
Blue-winged Warbler ◊	0	0	0	0	1	0	0	0	0	0	1	3
Yellow-rumped Warbler	0	0	0	0	0	1	0	0	0	11	12	-
Yellow Warbler	1	2	1	0	0	0	2	0	1	0	7	1
Northern Cardinal	2	2	1	0	3	2	1	0	0	2	13	-
Song Sparrow	2	2	4	2	1	1	3	0	1	1	17	1
Chipping Sparrow	0	0	1	1	0	1	1	0	2	0	6	1
Dark-eyed Junco	0	0	0	0	0	0	0	0	1	2	3	-
White-throated Sparrow	0	1	0	0	3	2	0	0	3	1	10	-
Swamp Sparrow	0	0	1	0	0	0	1	0	0	0	2	1
Red-winged Blackbird	15	10	10	5	1	4	5	2	1	0	53	2.3
Common Grackle	0	0	5	7	0	0	0	3	1	1	17	-
Brown-headed Cowbird	0	0	0	0	1	1	3	1	0	0	6	1
American Goldfinch	1	1	0	0	0	0	0	0	1	0	3	2
House Sparrow *	0	0	0	0	0	0	3	0	3	0	6	-
Total number of individuals	29	23	43	29	15	27	34	14	23	30	267	
Total number of species	11	10	13	10	11	16	16	10	17	14	35	
Endangered species	0	0	0	0	0	0	0	0	0	0	0	
Threatened species	0	1	0	0	0	0	0	0	0	0	1	
Watch List species	0	0	0	0	0	0	0	0	0	0	0	
Species of concern	0	0	0	0	1	0	0	0	0	0	1	

†† = Illinois threatened; ** = Illinois watch list; ◊ = *Species of concern*; * = Non-native.

Table 16. Stearns Road breeding census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Species	Census Point										Total	C
	S 2	S 3	S3-A	S 4	S 6	S 7	S 8	S 9	S10	S11		
Green Heron	0	0	0	1	0	0	0	0	0	0	1	-
Great Blue Heron	0	0	1	0	0	0	0	0	0	0	1	-
Ring-necked Pheasant *	0	0	1	0	0	0	0	0	0	0	1	-
Sora **	0	0	0	1	0	0	0	0	0	0	1	-
Northern Flicker	0	0	0	0	1	1	2	0	1	1	6	1
Downy Woodpecker	0	0	0	0	1	0	0	1	1	1	4	-
Hairy Woodpecker	0	0	0	0	0	1	0	0	0	0	1	-
Eastern Wood-pewee	0	0	2	0	0	0	1	0	0	0	3	2
Eastern Phoebe	0	0	0	0	0	0	1	0	0	0	1	2
Great-crested Flycatcher	0	0	0	0	0	0	0	0	0	1	1	3
Blue Jay	2	0	0	0	0	0	0	1	1	2	6	-
American Crow	1	0	0	0	0	0	0	0	1	0	2	-
Black-capped Chickadee	0	0	0	0	0	0	2	0	0	0	2	-
House Wren	0	0	0	2	4	1	0	1	1	3	12	1
Marsh Wren ◊	0	0	2	0	0	0	0	0	0	0	2	4
Wood Thrush ◊	0	0	0	0	0	0	0	0	0	1	1	4
American Robin	2	1	5	2	1	2	1	1	0	1	16	1
Gray Catbird ◊	1	2	0	0	0	1	3	1	1	1	10	3
Brown Thrasher	0	0	0	0	0	0	1	0	0	0	1	-
Cedar Waxwing	0	0	3	0	0	2	1	0	0	0	6	2
European Starling *	0	0	20	0	0	0	0	0	0	0	20	-
Warbling Vireo	1	0	1	1	0	0	1	0	0	0	4	2
Yellow Warbler ◊	2	1	1	0	0	0	1	0	0	0	5	3
Mourning Dove	0	1	0	0	0	0	0	0	0	1	2	1
Common Yellowthroat	1	2	2	0	1	1	1	0	0	0	8	2
Northern Cardinal	1	0	0	0	1	2	1	2	0	2	9	-
Indigo Bunting	1	1	0	0	1	0	0	1	0	1	5	2
Eastern Towhee ◊	0	0	0	0	0	0	0	0	0	1	1	3
Song Sparrow ◊	2	1	4	2	1	2	2	0	0	1	15	3
Chipping Sparrow	1	0	1	0	0	0	0	0	0	0	2	2
Eastern Meadowlark ◊	0	0	1	0	0	0	0	0	0	0	1	3
Red-winged Blackbird	10	5	9	8	1	2	10	0	0	0	45	2
Common Grackle	0	0	5	0	1	0	0	0	0	1	7	-
Brown-headed Cowbird	0	1	1	0	1	1	1	1	0	1	7	1
Baltimore Oriole ◊	1	0	0	0	0	0	0	0	0	1	2	3
American Goldfinch	0	1	0	0	2	0	2	0	0	0	5	2
House Sparrow *	1	0	0	5	0	0	0	0	0	0	6	-
Total number of individuals	27	16	59	22	16	16	31	9	6	20	202	
Total number of species	14	10	16	8	12	11	16	8	6	16	37	
Endangered species	0	0	0	0	0	0	0	0	0	0	0	
Threatened species	0	0	0	0	0	0	0	0	0	0	0	
Watch Listed species	0	0	1	0	0	0	0	0	0	0	1	
Species of concern	4	3	4	1	1	2	3	1	1	6	9	

** = Illinois watch list; ◊ = *Species of concern*; * = Non-native.

Table 17. Stearns Road fall census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Species	Census Point											Total	C
	S2	S3	S3-A	S4	S5	S6	S7	S8	S9	S10	S11		
Great-horned Owl	0	1	0	0	0	0	0	0	0	0	0	1	-
Red-bellied Woodpecker	0	0	0	0	0	0	1	0	0	0	0	1	-
Downy Woodpecker	1	0	0	1	3	0	1	1	1	0	0	5	-
Hairy Woodpecker	0	0	0	0	0	0	0	0	0	0	2	2	-
Blue Jay	0	2	0	1	1	0	1	0	0	0	1	5	-
American Crow	4	5	0	0	1	0	0	0	2	0	1	12	-
Black-capped Chickadee	0	3	0	1	1	0	1	1	0	0	4	10	-
Brown Creeper ††	0	0	0	0	0	0	0	0	0	0	1	1	-
Golden-crowned Kinglet	1	0	0	0	0	0	0	0	0	0	0	1	2.3
Northern Cardinal	1	0	0	0	2	0	0	0	0	0	0	1	-
American Tree Sparrow	0	1	0	0	0	0	0	3	0	0	0	4	-
Dark-eyed Junco	2	0	0	0	0	0	0	0	0	0	0	2	-
Swamp Sparrow	0	1	0	0	0	0	0	0	0	0	0	1	1
House Finch *	0	0	0	1	0	0	0	0	0	2	0	3	-
Total individuals	9	13	0	4	11	0	4	5	3	2	9	49	
Total number of species	5	6	0	4	7	0	4	3	2	1	5	14	
Endangered species	0	0	0	0	0	0	0	0	0	0	0	0	
Threatened species	0	0	0	0	0	0	0	0	0	0	1	1	
Watch List species	0	0	0	0	0	0	0	0	0	0	0	0	
Species of concern	0	0	0	0	0	0	0	0	0	0	0	0	

†† = Illinois threatened, * = Non-native.

Table 18. Dean Street four-season census results (one point). The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Species	Winter		Spring		Breeding		Fall	
	Total	C	Total	C	Total	C	Total	C
Red-tailed Hawk	1	1	0	-	1	1	0	-
Mourning Dove	1	1	1	1	1	1	0	-
Downy Woodpecker	1	-	0	-	0	-	1	-
Northern Flicker	0	-	1	2.3	0	-	0	-
Blue Jay	2	-	4	-	0	-	0	-
American Crow	3	-	2	-	0	-	3	-
Black-capped Chickadee	3	-	5	-	3	-	3	-
House Wren	0	-	1	1.3	2	1	0	-
Golden-crowned Kinglet	3	2	0	0	0	-	0	-
American Robin	0	-	1	1	1	1	0	-
Gray Catbird \diamond	0	-	0	-	1	3	0	-
Brown Thrasher	0	-	1	-	0	-	0	-
Cedar Waxwing	0	-	0	-	3	2	0	-
European Starling *	8	-	1	-	0	-	0	-
Northern Cardinal	6	-	3	-	2	-	0	-
Song Sparrow \diamond	1	1	3	1	1	3	0	-
Chipping Sparrow	0	-	1	1	1	2	0	-
Dark-eyed Junco	3	-	1	-	0	-	0	-
White-throated Sparrow	0	-	3	-	0	-	0	-
Red-winged Blackbird	0	-	5	2.3	3	2	0	-
Common Grackle	0	-	0	-	3	-	4	-
Brown-headed Cowbird	0	-	0	-	1	1	0	-
Northern Oriole \diamond	0	-	0	-	2	3	0	-
House Finch *	1	-	1	-	0	-	0	-
American Goldfinch	1	1	0	-	1	2	0	-
European House Sparrow *	10	-	2	-	0	-	3	-
Total individuals	44		36		26		14	
Total number of species	14		17		16		5	
Endangered species	0		0		0		0	
Threatened species	0		0		0		0	
Watch List species	0		0		0		0	
Species of concern	0		0		3		0	

* = Non-native; \diamond = Species of concern.

Table 19. Mooseheart Road winter census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Census Point				
Species	M1	M2	Total	C
Blue Jay	2	0	2	-
American Crow	4	1	5	-
Black-capped Chickadee	3	4	7	-
Brown Creeper ††	0	1	1	-
European Starling *	3	1	4	-
Northern Cardinal	4	2	6	-
American Tree Sparrow	0	3	3	-
Dark-eyed Junco	0	3	3	-
House Finch *	2	2	4	-
Total number of individuals	18	17	35	
Total number of species	6	8	9	
Endangered species	0	0	0	
Threatened species	0	1	1	
Watch List species	0	0	0	
Species of concern	0	0	0	

†† = Illinois threatened, * = Non-native.

Table 20. Mooseheart Road spring census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Census Point				
Species	M1	M2	Total	C
Mourning Dove	2	2	4	1
Northern Flicker	1	0	1	2.3
Downy Woodpecker	2	0	2	-
Blue Jay	3	2	5	-
American Crow	1	0	1	-
Black-capped Chickadee	0	1	1	-
Ruby-crowned Kinglet	1	0	1	-
American Robin	3	1	4	1
European Starling *	2	0	2	-
Northern Cardinal	3	5	8	-
Song Sparrow	2	2	4	1
American Tree Sparrow	0	3	3	-
Dark-eyed Junco	2	2	4	-
Red-winged Blackbird	1	0	1	2.3
Common Grackle	7	0	7	-
Brown-headed Cowbird	0	2	2	1
Total number of individuals	30	20	50	
Total number of species	13	9	16	
Endangered species	0	0	0	
Threatened species	0	0	0	
Watch List species	0	0	0	
Species of Concern	0	0	0	

* = Non-native.

Table 21. Mooseheart Road breeding census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al, 1992).

Census Point				
Species	M1	M2	Total	C
Ring-necked Pheasant *	0	1	1	-
Downy Woodpecker	0	1	1	-
Blue Jay	1	3	4	-
American Crow	0	1	1	-
Black-capped Chickadee	3	1	4	-
American Robin	3	2	5	1
Gray Catbird ◇	1	0	1	3
Cedar Waxwing	2	1	3	2
European Starling *	2	1	3	-
Mourning Dove	1	1	2	1
Northern Cardinal	1	2	3	-
Indigo Bunting	1	2	3	2
Song Sparrow ◇	1	0	1	3
Common Grackle	2	2	4	-
Brown-headed Cowbird	1	1	2	1
House Finch *	0	3	3	-
American Goldfinch	2	2	4	2
House Sparrow *	0	1	1	-
Total number of individuals	21	25	46	
Total number of species	13	16	18	
Endangered species	0	0	0	
Threatened species	0	0	0	
Watch List species	2	0	2	
Species of concern	2		2	

◇ *Species of concern*; * = non-native species.

Table 22. Mooseheart Road fall census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Species	Census Point						Total	C
	M1	M2	M3	M4	M5	M6		
Canada Goose	0	0	0	1	0	0	1	-
Mourning Dove	0	0	0	1	0	0	1	1
Belted Kingfisher	0	0	1	0	0	0	1	1.7
Red-bellied Woodpecker	0	0	1	1	0	0	2	-
Downy Woodpecker	1	1	0	1	2	1	6	-
Blue Jay	1	0	4	1	5	1	12	-
American Crow	4	0	0	0	0	0	4	-
Black-capped Chickadee	0	0	1	0	2	0	3	-
White-breasted Nuthatch	0	0	1	2	1	0	4	-
Brown Creeper ††	0	0	0	0	3	0	3	-
Golden-crowned Kinglet	0	0	0	0	1	0	1	2.3
Ruby-crowned Kinglet	0	0	1	0	2	1	4	-
Hermit Thrush	0	0	1	0	1	0	2	-
American Robin	0	0	1	6	2	3	12	1
Gray Catbird	0	0	0	0	0	1	1	2
Cedar Waxwing	5	1	1	2	2	5	16	2.3
European Starling *	0	0	3	0	0	3	6	-
Yellow-rumped Warbler	0	0	1	1	0	0	2	-
American Redstart	0	0	0	0	2	0	2	2
Northern Cardinal	1	1	1	2	1	0	6	-
Song Sparrow	0	0	0	0	0	1	1	1
White-throated Sparrow	0	0	0	0	3	0	3	-
Red-winged Blackbird	0	0	0	0	0	4	4	2.3
Common Grackle	0	0	3	0	0	0	3	-
American Goldfinch	0	0	0	0	2	1	3	2
House Sparrow*	0	1	2	0	0	0	3	-
Total Individuals	12	4	22	18	29	21	106	
Species Richness	5	4	14	10	14	10	26	
Endangered species	0	0	0	0	0	0	0	
Threatened species	0	0	0	0	1	0	1	
Watch List species	0	0	0	0	0	0	0	
Species of Concern	0	0	0	0	0	0	0	

†† = Illinois threatened; ◇ = *Species of concern*; * = non-native species.

Table 23. Red Gate Road fall census results. The values represent the sum of the two censuses conducted at each census point. Counts for each point are presented as well as the total count for each species. The "C" is a measure of the level of concern for each species (Thompson et al. 1992).

Census Point						
Species	R11	R12	R13	R14	Total	C
Red-bellied Woodpecker	0	0	0	1	1	-
Northern Flicker	0	1	0	1	2	2.3
Downy Woodpecker	1	1	0	1	3	-
Blue Jay	2	3	0	1	6	-
American Crow	0	7	1	0	8	-
Black-capped Chickadee	2	2	0	0	4	-
White-breasted Nuthatch	2	1	0	0	3	-
Brown Creeper ††	2	0	0	0	2	-
Ruby-crowned Kinglet	1	0	0	0	1	-
Hermit Thrush	0	2	0	0	2	-
American Robin	0	0	0	1	1	1
Cedar Waxwing	0	2	0	0	2	2.3
European Starling *	0	3	0	0	3	-
Yellow-rumped Warbler	0	4	0	1	5	-
Northern Cardinal	1	0	0	1	2	-
Chipping Sparrow	0	4	0	0	4	1
White-throated Sparrow	0	0	0	1	1	-
House Finch *	1	0	0	0	1	-
American Goldfinch	0	1	1	0	2	2
Total number of individuals	12	31	2	8	53	
Total number of species	8	12	2	8	19	
Endangered species	0	0	0	0	0	
Threatened species	1	0	0	0	1	
Watch List species	0	0	0	0	0	
Species of concern	0	0	0	0	0	

†† = Illinois threatened; * = non-native species.

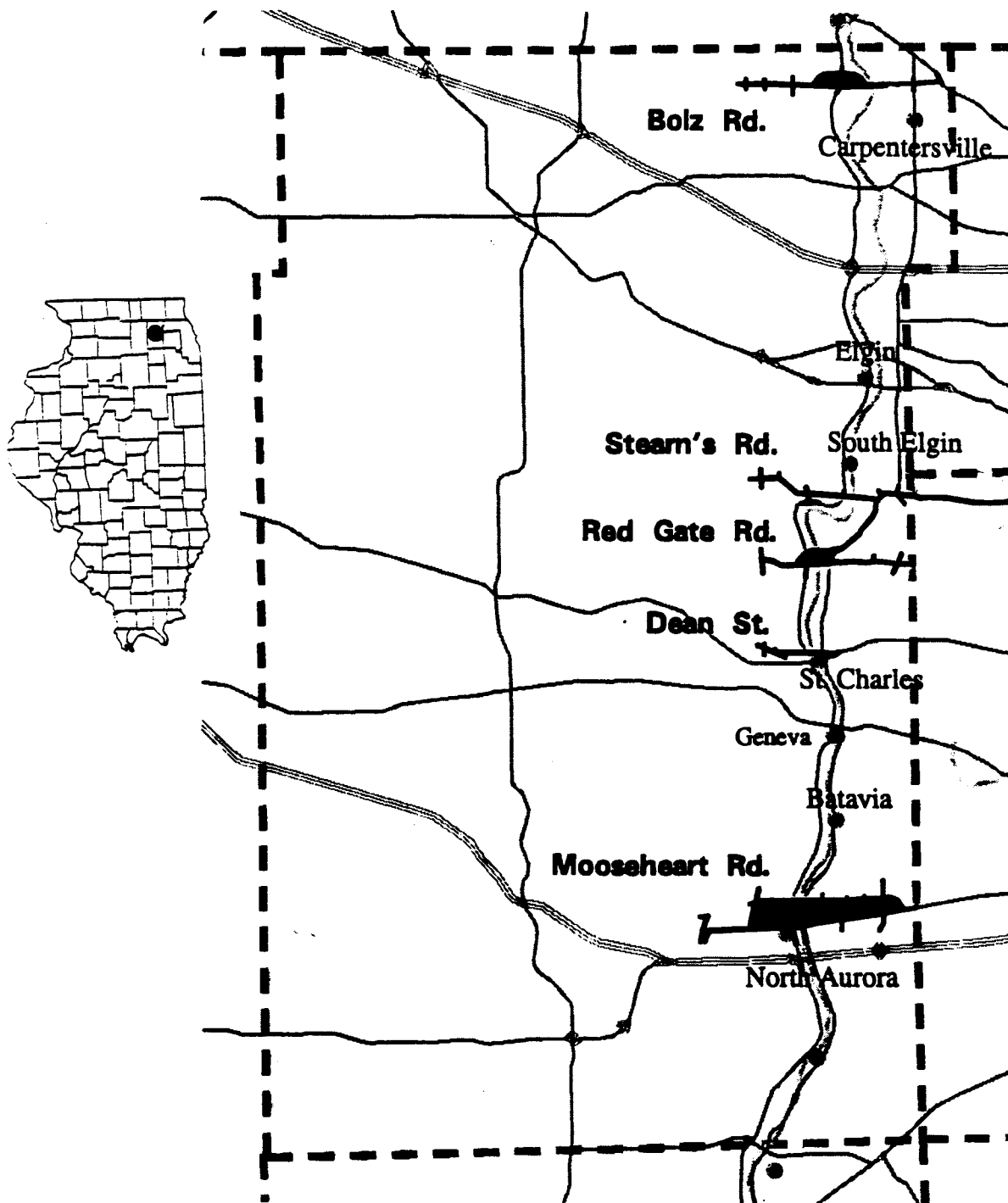


Figure 1. Location of Fox River crossing corridors.

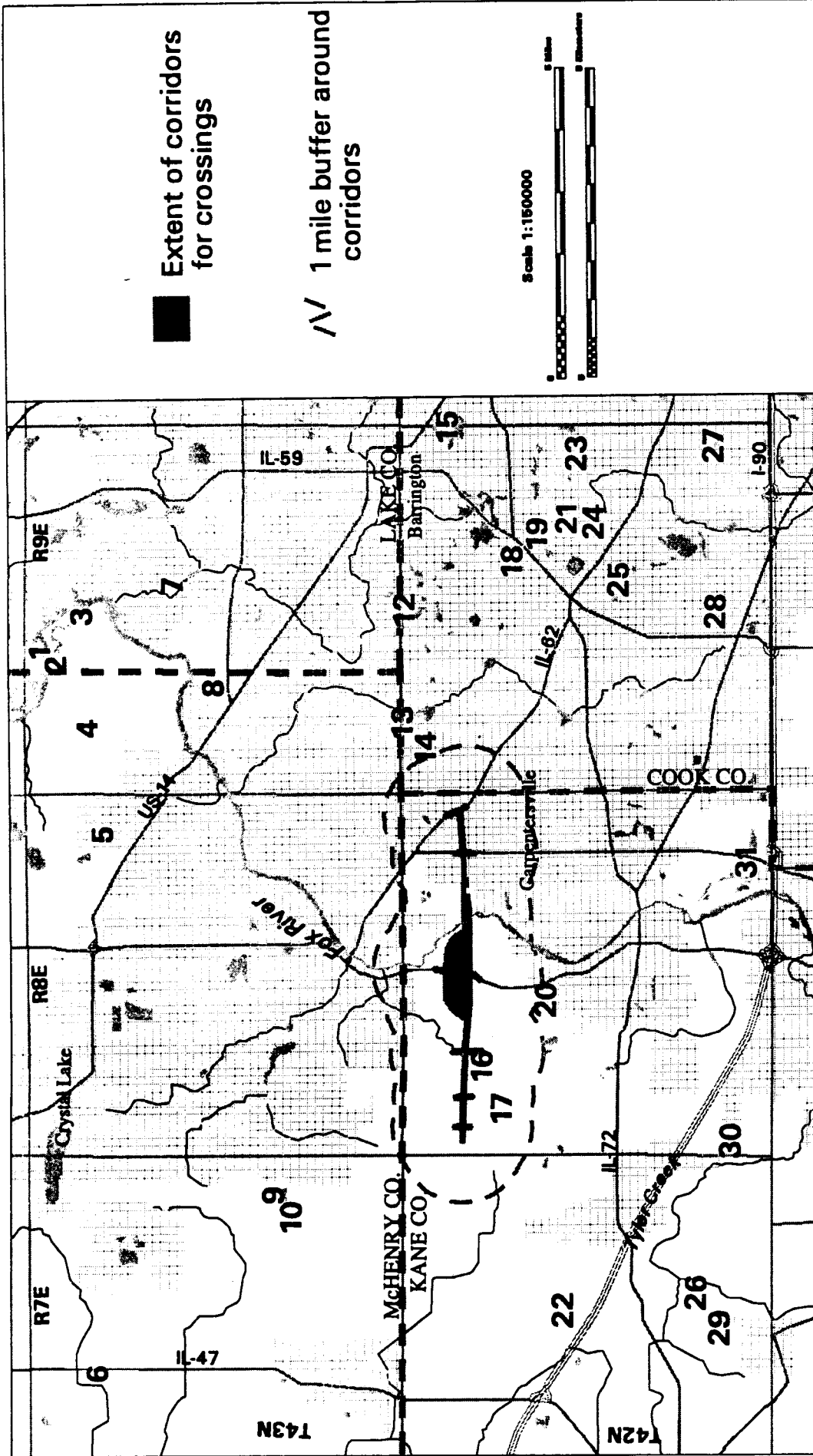


Figure 2. Endangered and threatened bird species records: Bolz Road corridor vicinity. (+ = Illinois Endangered; ++ = Illinois Threatened; +* = recently removed from the Illinois Endangered list. Confirmed breeding within the last 20 years are in bold type).

1. Great Egret ++; 2. American Bittern +; 3. Sandhill Crane ++; 4. Cooper's Hawk +*; 5. Great Egret ++; 6. Swainson's Hawk +; 7. Red-shouldered Hawk +; 8. Red-shouldered Hawk +; 9. Common Moorhen ++, Yellow-headed Blackbird +; 10. Sandhill Crane +; 12. Red-shouldered Hawk +; 13. Yellow-headed Blackbird +; 14. Least Bittern +, Cooper's Hawk +*; 15. Pied-billed Grebe ++, Double-crested Cormorant ++, Great Egret ++, Black-crowned Night-heron ++; 16. Pied-billed Grebe ++; 17. Yellow-headed Blackbird +; 18. Red-shouldered Hawk +; 19. Henslow's Sparrow +; 20. Heron Rookery; 21. Pied-billed Grebe ++, Double-crested Cormorant ++, Black-crowned Night-heron ++, Common Moorhen ++, Black Tern +, Yellow-headed Blackbird +; 22. Pied-billed Grebe ++; 23. Black Tern +, Yellow-headed Blackbird +; 24. Double-crested Cormorant ++, Great Egret ++, Black-crowned Night-heron ++, Heron Rookery; 25. Pied-billed Grebe ++; 26. Swainson's Hawk +; 27. Yellow-headed Blackbird +; 28. Pied-billed Grebe ++; 29. Upland Sandpiper +; 30. Swainson's Hawk +; 31. Cooper's Hawk +*.

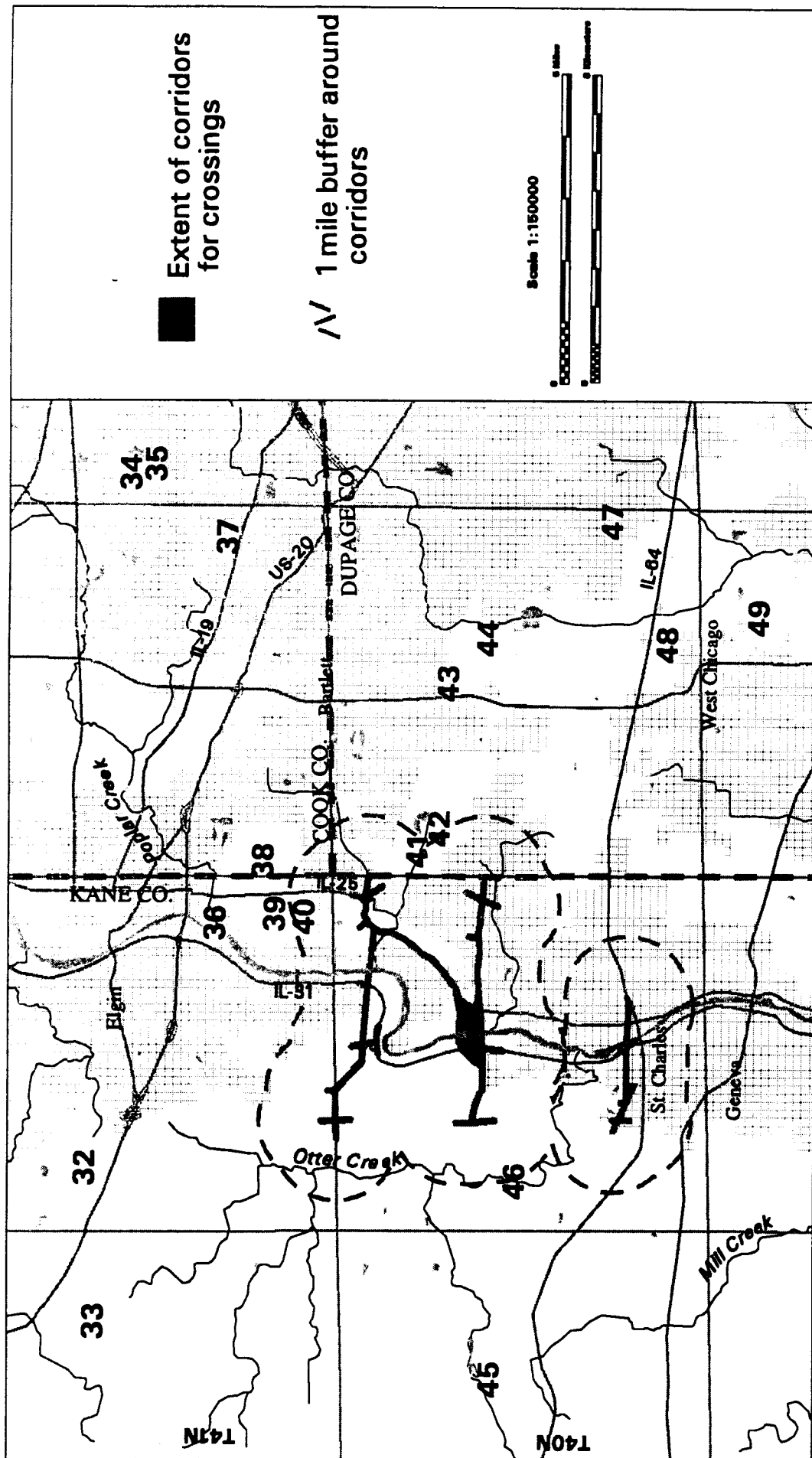


Figure 3. Endangered and threatened bird species records: Stearns Road, Red Gate Road and Dean Street vicinities. († = Illinois Endangered; †† = Illinois Threatened; †* = recently removed from the Illinois Endangered list. Confirmed breeding records within the last 20 years are in bold type.) 32. Swainson's Hawk. 33. Pied-billed Grebe ††; Black-crowned Night-heron ††, Yellow-headed Blackbird †; 34. Black Tern †, Yellow-headed Blackbird †; 35. Common Moorhen ††, Black Tern †, Yellow-headed Blackbird †; 36. Black-crowned Night-heron ††; 37. Yellow-headed Blackbird †; 38. Cooper's Hawk †*, Veery ††, Heron Rookery; 39. Heron Rookery; 40. Pied-billed Grebe ††; 41. Pied-billed Grebe ††, Black Tern †, Yellow-headed Blackbird †; 42. Sandhill Crane †, 43. Pied-billed Grebe ††, Common Moorhen ††, Black Tern †, Yellow-headed Blackbird †; 44. Pied-billed Grebe ††; 45. Pied-billed Grebe ††; 46. Pied-billed Grebe ††, Black Tern †, Yellow-headed Blackbird †; 47. Pied-billed Grebe ††, Least Bittern †, Common Moorhen ††, Black Tern †, Yellow-headed Blackbird †; 48. Pied-billed Grebe ††; 49. Pied-billed Grebe ††.

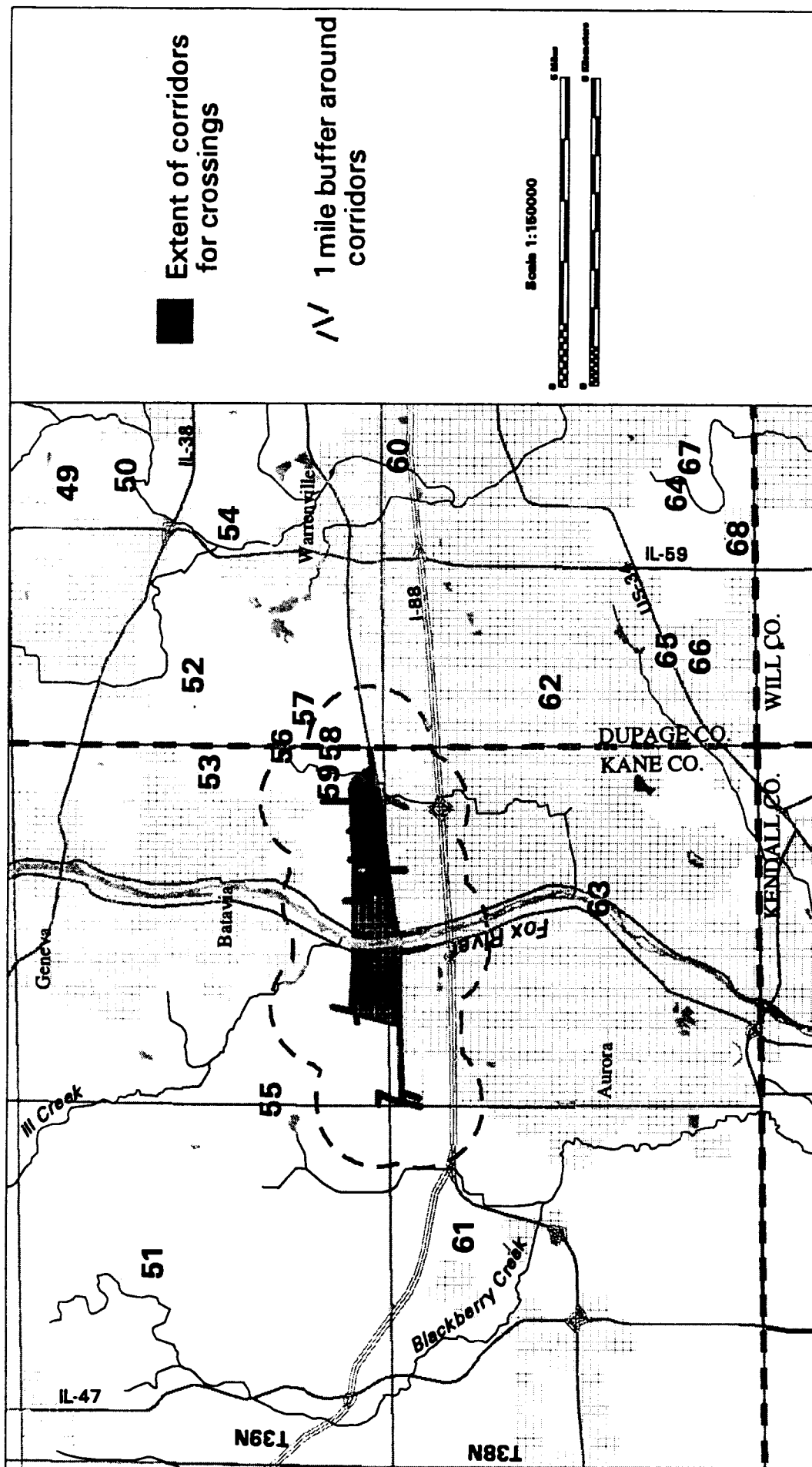


Figure 4. Endangered and threatened bird species records: Mooseheart Road vicinity. († = Illinois Endangered; †† = Illinois Threatened; †* = recently removed from the Illinois Endangered list. Confirmed breeding records within the last 20 years are in bold type.)

49. Pied-billed Grebe ††; 50. Yellow-headed Blackbird †; 51. Swainson's Hawk †; 52. Upland Sandpiper †; 53. Loggerhead Shrike ††; 54. Pied-billed Grebe ††, Least Bittern †, Cooper's Hawk †*, Common Moorhen ††, Henslow's Sparrow †, Yellow-headed Blackbird †; 55. Sandhill Crane †; 56. Upland Sandpiper †; 57. Great Egret ††; 58. Cooper's Hawk ††; 59. Brown Creeper ††; 60. Pied-billed Grebe ††; 61. Least Bittern †; 62. Common Moorhen ††; 63. Yellow-headed Blackbird †; 64. Short-eared Owl †; 65. Pied-billed Grebe ††, Least Bittern †, Great Egret ††, Black-crowned Night-heron ††, Yellow-headed Blackbird †; 66. Common Moorhen ††; 67. Northern Harrier †; 68. Loggerhead Shrike.

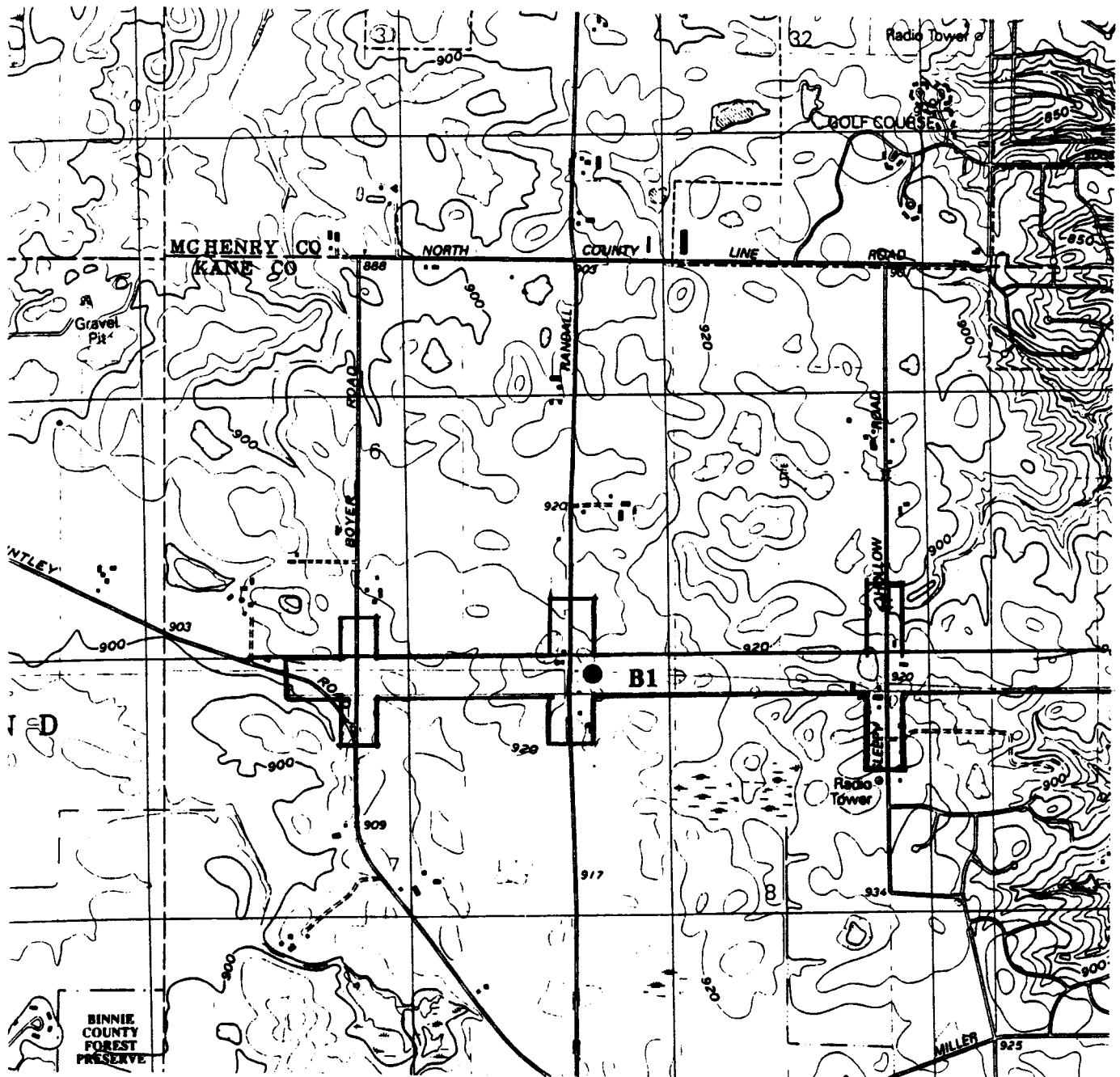


Figure 5. Location of census point B1; Bolz Road corridor.

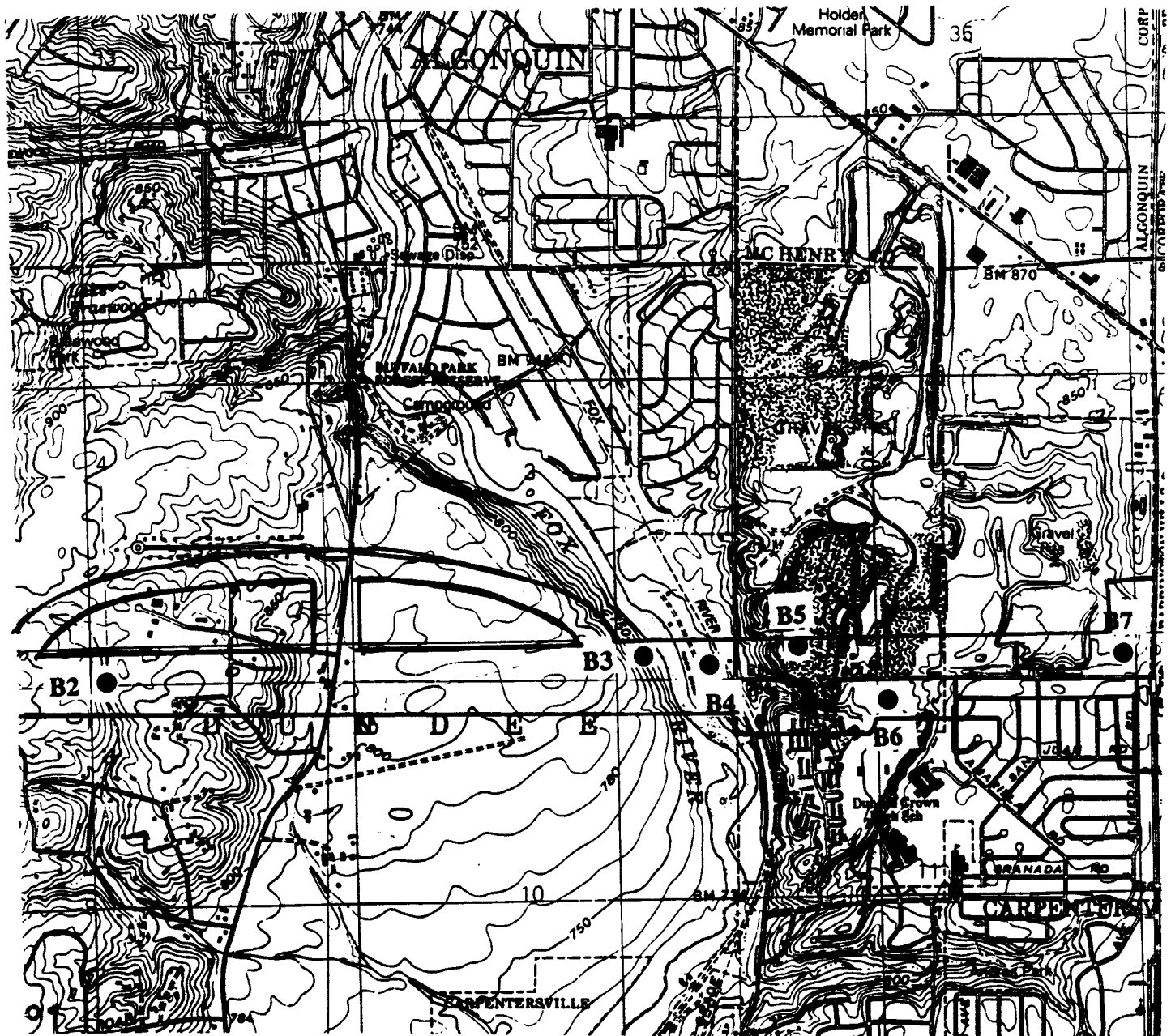


Figure 6. Location of census points B2-B7; Bolz Road corridor.

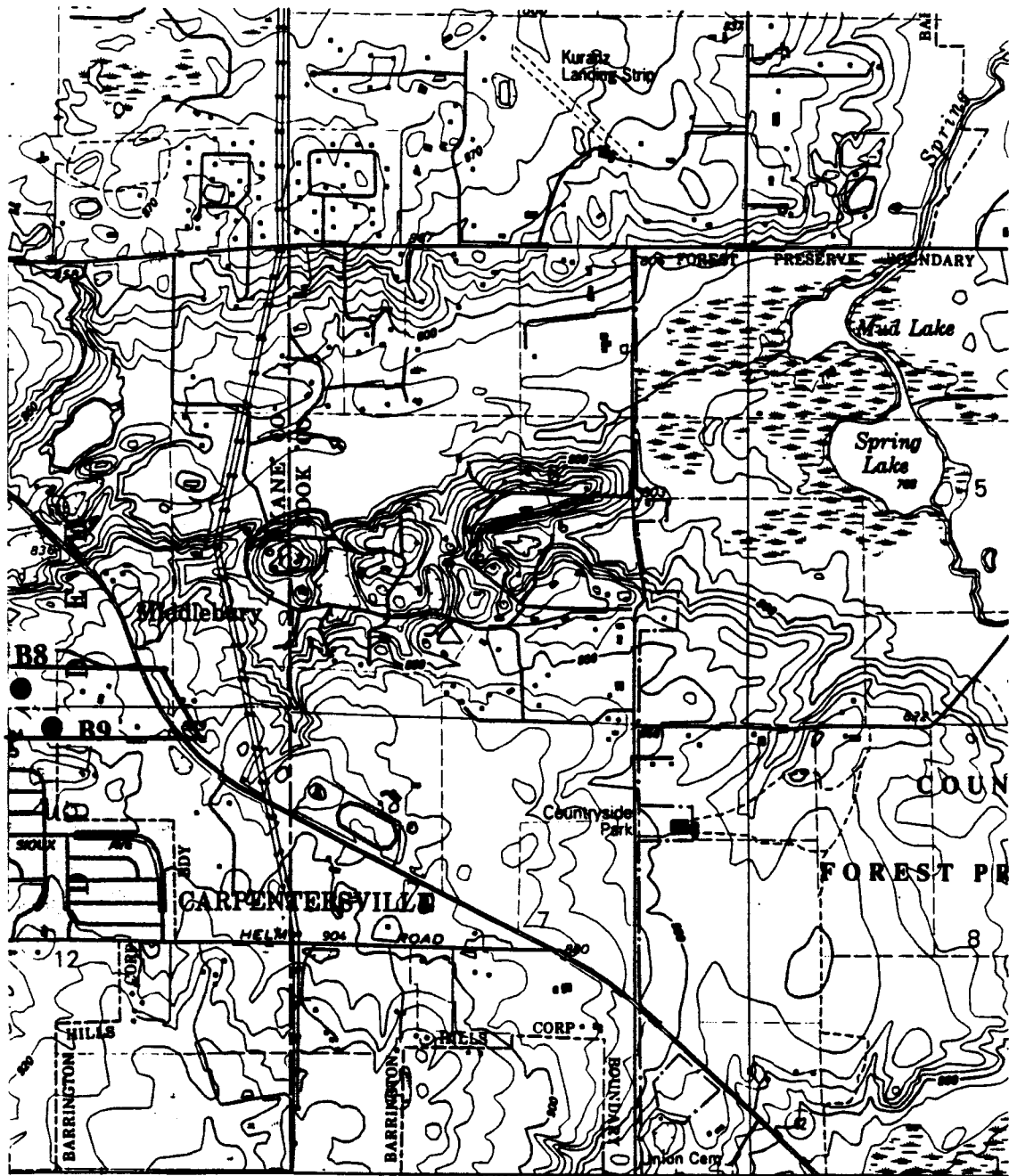


Figure 7. Location of census points B8 and B9; Bolz Road corridor.

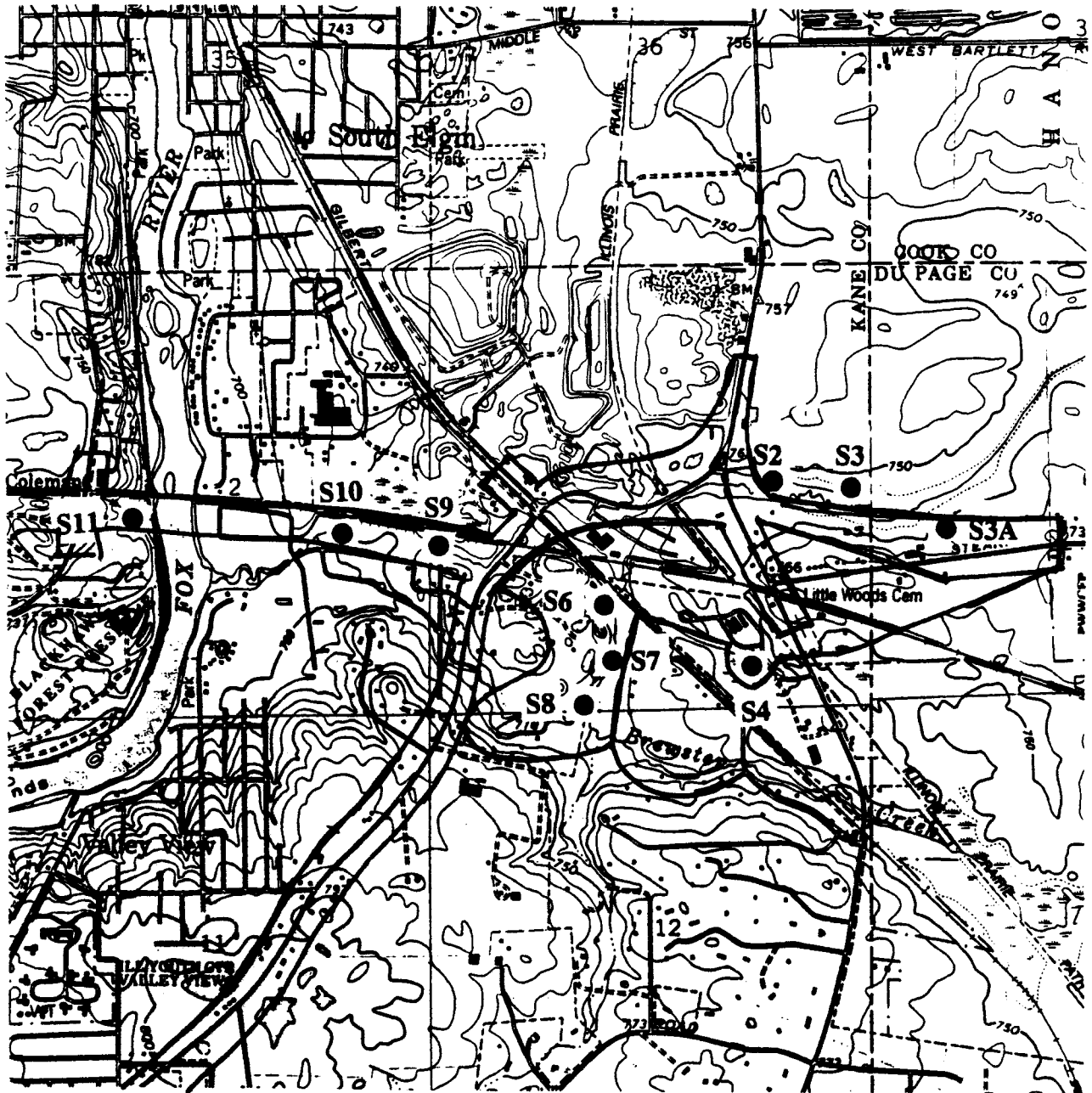


Figure 8. Location of census points; Stearns Road corridor.

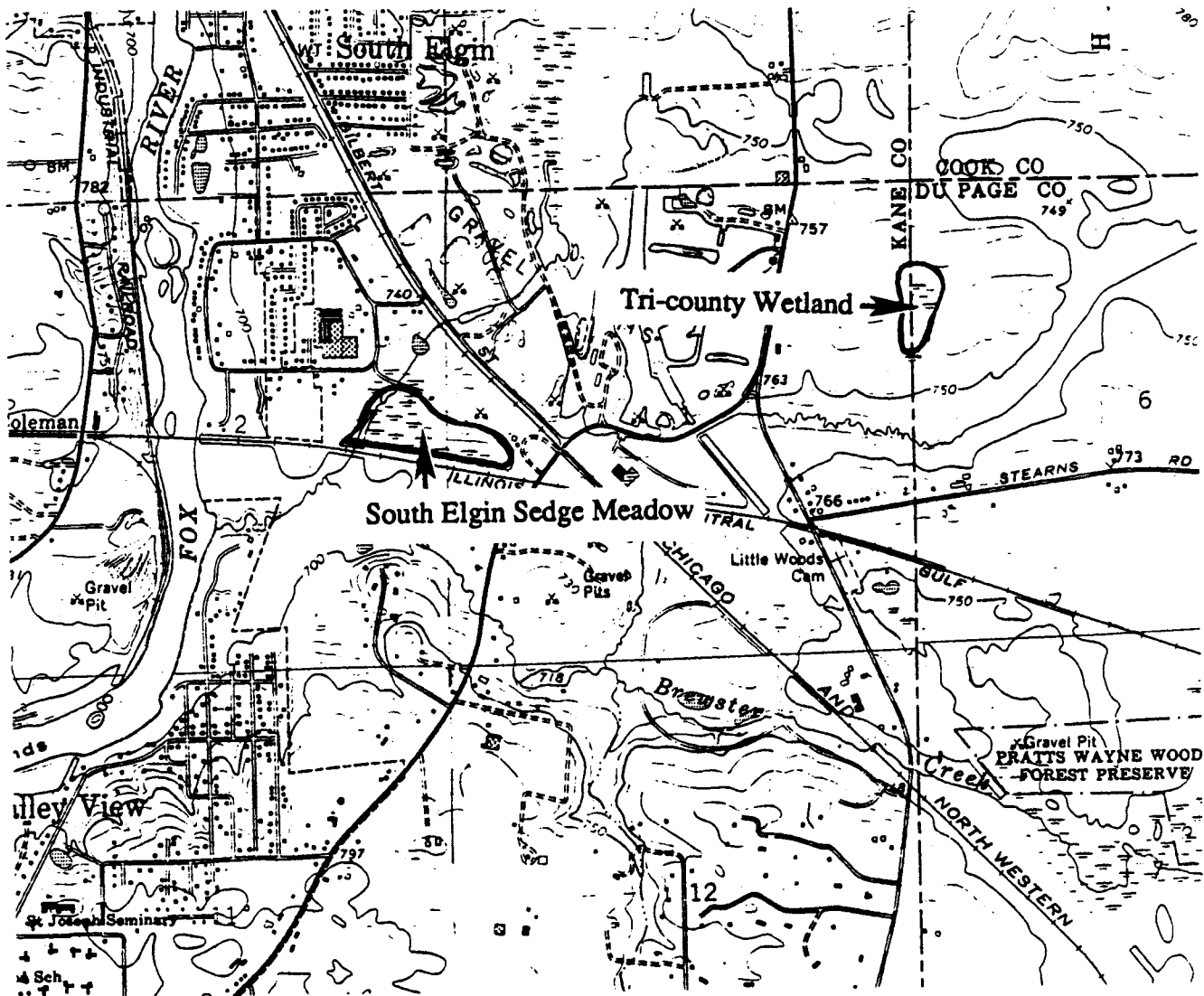


Figure 9. Location of designated Illinois Natural Areas; Stearns Road corridor.

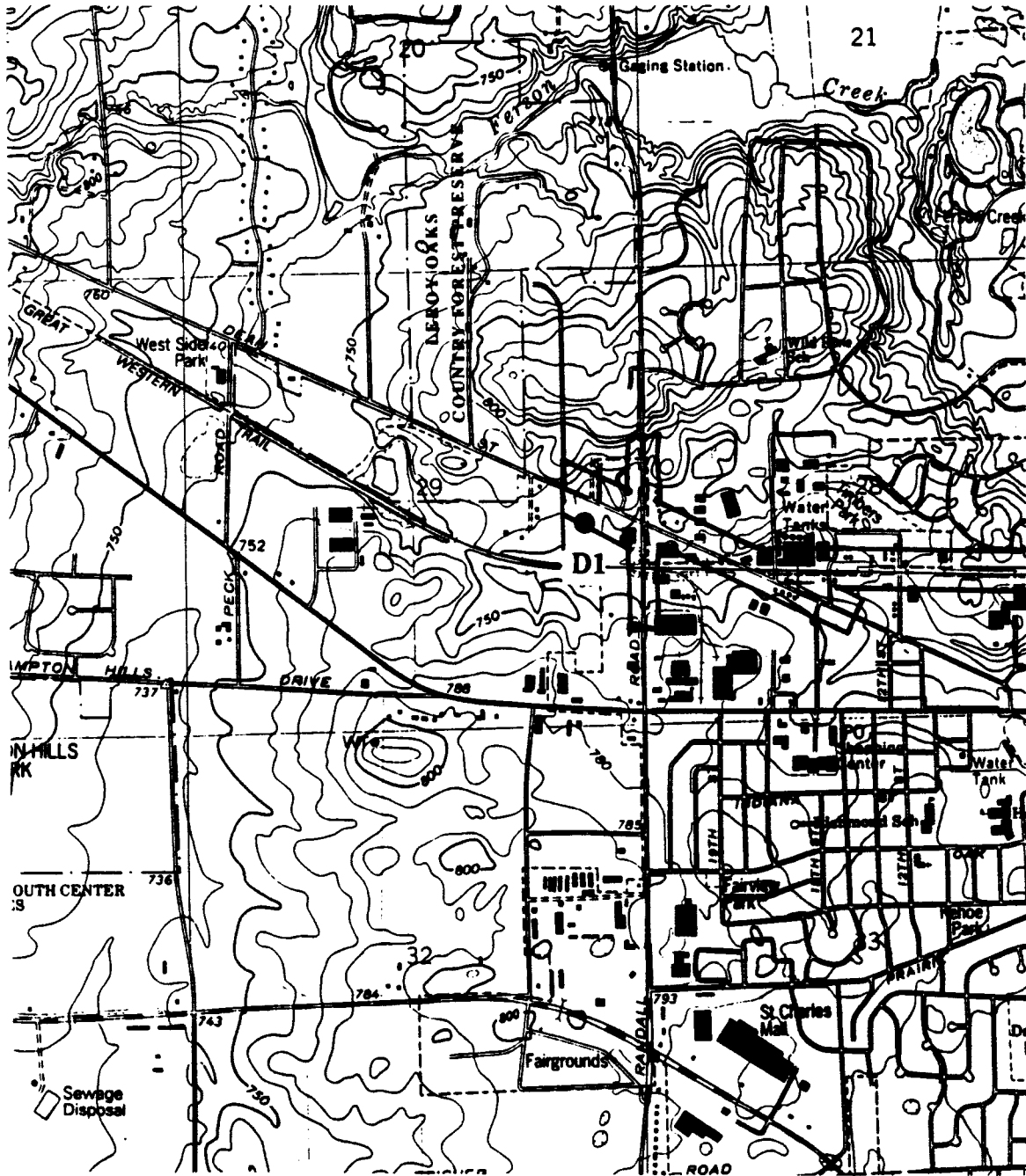


Figure 10. Location of census point D1; Dean Street corridor.



Figure 11. Location of census points; Mooseheart Road corridor.

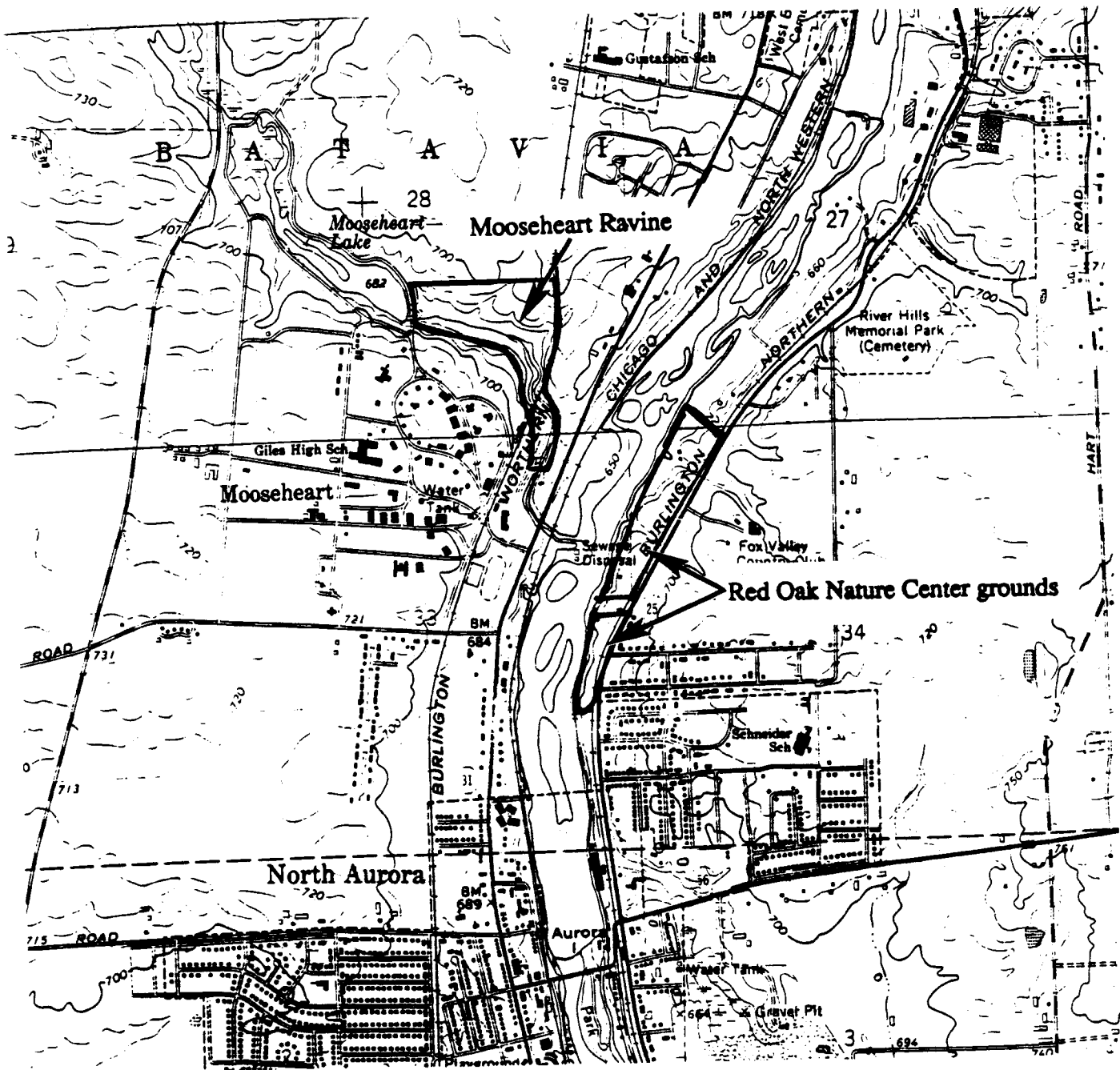


Figure 12. Location of designated Illinois Natural Area sites and the Red Oak Nature Center grounds; Mooseheart Road corridor.



Figure 13. Location of census points; Red Gate Road corridor.